

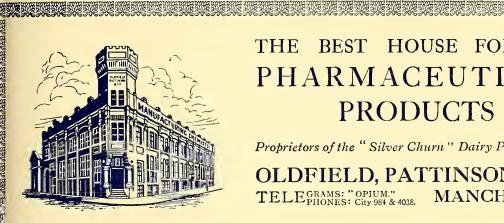
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**DECEMBER 10, 1921.** 

VOL. XCV.



### HOUSE FOR ALL BEST THE PHARMACEUTICAL **PRODUCTS**

Proprietors of the "Silver Churn" Dairy Preparations.

OLDFIELD, PATTINSON & Co. MANCHESTER.

## Important Notice to the Retail Trade.

## REDUCTION IN PRICE

"Allenburys" No. 3 Malted Food

> Reduced Prices will come into force on the following dates:

> RETAIL TRADE December 9th, 1921 PUBLIC - December 30th, 1921

Allen & Hanburys Limited Bethnal Green, E. 2.

**MINIMUM** PRICES

OLD NEW

1/6 each 1/3 each

2/6

6/3

12/6 15/-

> Subject to our usual Food Speciality Discounts.

## The Standard Work of Reference

IS

# MAY, ROBERTS' PROPRIETARIES PRICE LIST

We must confess that our object in making it the most complete and up-to-date list in the trade is to assist existing customers and to persuade others into the fold, and while we are highly flattered by those chemists who use it as a means of keeping other suppliers up to the scratch, we should prefer that they would give us an opportunity to demonstrate our celerity and accuracy in executing their orders.

# MAY, ROBERTS' PROPRIETARIES LIST NOVEMBER 15, 1921.

We have established our own Printing Works so that we might be in a position to keep Pharmacists (and our competitors) absolutely up to date in regard to changes of price, new lines, etc. The present list is corrected up to November 1, and includes an inset showing the few alterations in prices up to November 15. You cannot afford to be without it, and now's the time to send a postcard for a copy.

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Or any other desired assortment to the value of 20/-

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HE authors of this advertisement are the proprietors of one of the best known proprietary lines, and are conducting a very successful business with chemists.

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- I. To reduce the capital by a substantial cash payment to the Shareholders.
- 2. To invest the surplus funds in Government and trustee securities.
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- (1) The names in the Towns and Villages, alphabetically arranged under each County.
- (2) The names under each particular Trade, in the administrative County of London.
- (3) The names for the rest of England, Scotland and Wales, similarly arranged.
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It may interest you to know that Kelly's are publishers of, or Agents for, nearly 150 Directories—Local, Trade, &c.—which cover the Trade World entirely, and most of the districts and countries of the World; no business library is complete without one or many of these Directories.



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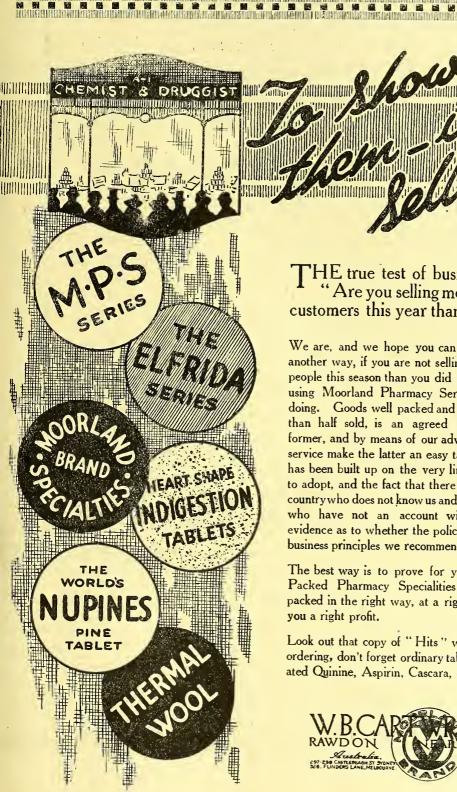
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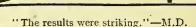
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Send us a postal card and we will send you a 32-page catalogue of professional and business books for pharmacists, and a copy of

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WHITE DRILL ... 12/6 BLACK DRILL ... 17/6 HOLLAND DRILL... 17/6

Sizes 34, 36, 38, 40, 42 and 44 inches over waistcoa?. SPECIAL QUOTATIONS FOR QUANTITIES.

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First-aid Pastilles.

A paying proposition that will keep your Cash Register ticking "Tenpences" all day long.

Write now for interesting folder, "From Tin to Till," also particulars of the NATIONAL advertising Campaign and liberal Trade Terms. Write on Business Heading.

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We are now manufacturing

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of various styles in

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The Prices are just as attractive.

Our exhibition of these new imitation gold boxes at the Chemists' Exhibition was a great success. A sample will be sent free to any interested wholesaler or manufacturer.

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Page

Dec. 10, 1921

No. 530

# Converting the Casual Customer.

It is not the casual customer who makes your business a success. It is the regular patron who comes to you time after time, year in and year out. Therefore the far-seeing chemist strives to convert every casual purchaser into a regular customer by supplying only goods of irreproachable quality and reliability.

He makes a point of seeing that every sale, however small, enhances his reputation. He insists that everything he handles, down to a penny ointment or a twopenny cotton wool, shall conform to a standard of quality consistent with his reputation. He keeps his attention riveted on the possibility of repeat orders.

This is one of the strongest reasons for buying from Maw's. Every article which carries our name is a quality product—something that will give more than ordinary satisfaction. Maw's lines brings certain repeats. They help to make permanent customers and constantly increasing profits.

And remember when you sell a Maw's line repeat orders must come to you, they cannot go to the hairdresser, the draper, or the fancy goods dealer, because Maw's lines are supplied exclusively to chemists.

Buy it from Maw's!

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Aldersgate St., London.

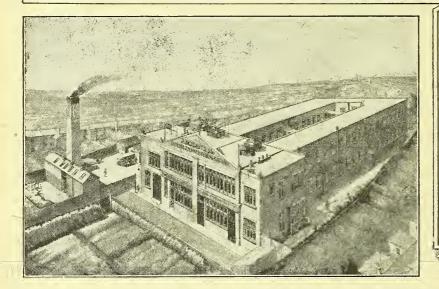
and Barnet.

Cables, Eleven London

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# H&T. KIRBY & COLTD

WHOLESALE MANUFACTURING CHEMISTS, Newman House, Belton Rd., Willesden Green, London N.W.



THE FOR House Compressed TABLETS

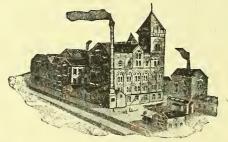
ESTABLISHED 1866.

Write for our Latest List of TABLETS and

PHONE: - WILLESDEN 1412. WIRE: - KIRBY LTB. PHONE, LONDON.



"John



Bull"

# MALT EXTRACT

and

Malt Extract and Cod Liver Oil

## IS THE BEST!!

Supplied in Bulk, Jars, Cardboard Containers, &c.

MALT EXTRACT POWDER. MALT FLOUR, specially manufactured for INFANTS' and INVALIDS' FOODS.

PAINE & CO. LTD., ST. NEOTS, HUNTS.

# GLOW-WELL LINIMENT

WINDOW DISPLAY BONUS

PROFIT ON COST 70°/0



FOR an order of **6 dozen** and a guaranteed Window Display of a fortnight's duration we offer:—

- 1. A Bonus of half-dozen.
- 2. A Window Display consisting of three lithographed Window Bills, two Showcards, one Giant Dummy, six Dummy Cartons, and sufficient purple Crepe Paper for background.
- 3. A profit of 62.5% on cost

## For an order of 9 dozen we offer:

Nos. 1 and 2 (mentioned above) and in addition:

- 3. A discount of 5% which is allowed off all £5 orders.
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P.A.T.A. Retail 1/6 Wholesale 12/- doz. nett

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SEND US ... YOUR NEXT ENQUIRY.



To combine the quality of his Medicines and general preparations, it is also essential that he should employ the very best quality of Printing, whatever the requirements may be. The Real Quality of our work, whether it is a

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presents a most attractive combination, and good quality is obtained therefore throughout.



# Thomas Waide & Sons 214.

Full set of Samples to Colonies 10/8, which we credit on orders of \$10 and upwards. Chemists' Printers, KIRKSTALL ROAD, LEEDS.

## P.A.T.A. NOTICE.

18 Tavistock Square, W.C. 1.

December 9th, 1921.

The following prices come into force on the dates specified:—

Allen & Hanburys'

Size		- 1	reps	. '		M.R.P	. M.	W.P.
1/3	No. 3	Food				1/3	12/-	doz.
26	,,	1.7			• • •	2/6	24/-	٠,,
6/3	,,	,,	• • •	•••		6/3	60/-	
12/6	,,	**	•••	•••	•••	12/6	120/-	,,
Prices	come	into	force t	o retail	lers,	Decemb	er 9th,	1921.
,,	,,	,,	,,	publ	ic,	97	30th,	,,

1/6 Allenburys Breakfast Food ... 1/6 14/5 doz. 3/- ,, ... 3/- 28/10 ,,

Prices come into force to retailers, November 28th, 1921.
", ", ", public, December 19th, ",

8-oz. Magnesia, The "Allenburys" 1/3 11/3 doz. 20/3 ,, 2/3 2/3 16-oz. 10-oz. Malt Extract 20/3 ,, 20 oz. 4/-36/oz. ", ", 5 fl. oz. Olive Oil ,, 15/9 ,, 1/9 27/-,, 20 ,, 5/6 49/6 ,,

Prices come into force to retailers, December 5th, 1921.

"Odontase" Dental Cream, 3 tubes given with each complete dozen as bonus.

## POWELL'S THERMOMETER CO.

Supply Thermometers of THEIR OWN MANUFACTURE ONLY.

DON'T forget that the N.P.L. testing has not made all Clinical Thermometers equal—and that Powell's Thermometer Co. are the Sole Makers of those two pre-eminent varieties, the "Double-Easy" and the "V.O.S."

Also makers of Chemical, Dairy, Bath, Brewers', Incubator and other Thermometers, 25 well as HYDROMETERS of all gravities.

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# BRILLIANTINE OIL

White, Half-White. Yellow, Red and Green, Odourless and Bloomless Oil for Brilliantine, in '40 - gallon barrels, 10 and 5-gallon drums.

Samples and Prices from HERTZ & CO., 9 Mincing Lane, E.C.3

Established 1878.

Phone: Telegrams: 10607 Central. "Freshness London." [7]

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WINUM AURANTII B.P.) Prepared in strict accordance with the Formula of the British Pharmacopeeia. (Wholesale only.) Samples from Head Office, Thomas Street, DUBLIN, or London Office, 43 Great Tower Street, LONDON, E.C.3.

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I solicit your enquiries for MEDICAL FLATS in all sizes, plain and graduated, MEXICANS, POISONS, KALIS, LIMES, VIALS, CANNONS, OVALS, BRILLIANTINES, in all shapes, SCREW JARS, TABLET BOTTLES, etc. etc. All bottles used in perfumery and chemist trades. Special shapes made. Wholesale quantities only.

G. VAN DER HOEK, 324/5 Bank Chambers, 329 High Holborn, LONDON, W.C.1.



# Doubles the delight!

The intricate steps of modern jazz, as well as the graceful steps of the old-time waltz, require a perfect dancing surface.

# "GLACIER" FLOOR GLOSS

SHOWCARDS are supplied on request.



quickly produces a perfect surface which "doubles the delight of dancing." It is easily applied, creates no dust, and will not mark the clothing, and gives perfect results in the home or the large dance hall.

Superbly packed in perforated lidded tins, attractively labelled. Chemist's name and address imprinted on label for orders of 6 dozen and upwards.

Per doz. - - - 11/6 21/Gross lots, per doz. - 11/- 20/6

Also supplied in bulk at the following prices:

7-14 lbs. 28-56 lbs. 1-cwt. Per lb. - 1/4 1/3 1/2

A massed display will bring the demand to your pharmacy.

Sample and specimen label free of charge on request.

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Manufacturing Chemists

Hanover Street, LIVERPOOL

Telegrams: "SUNDRIES LIVERPOOL."

# GET YOUR SHARE FROM THIS ADVERTISING!

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IT WILL PAY YOU TO DISPLAY THIS LINE!



Many samples of our products are being sent daily to DOCTORS, DENTISTS, NURSES, etc.

When folk ask for "Lysol"—they want the real thing.

SEE THAT YOU GIVE IT TO THEM.

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PASTILLE POINTS 5.

# The SELLING AIDS for

# EMULSION ANTISEPTIC THROAT PASTILLES

THE OWNER OF THE PARTY OF THE P

T is our experience that Emulsion Throat Pastilles (Kerfoot) practically sell themselves—but for the energetic Pharmacist who wants to make two sales where only one was made before, we supply a variety of selling aids which are described in greater detail below:—

**Showcards.** Large and Small. Splendid finish and good colouring. New designs frequently prepared.

Cartons. Three designs. Stout cardboard specially treated to resist damp. Supplied printed with Pharmacists' own name at considerably below cost.

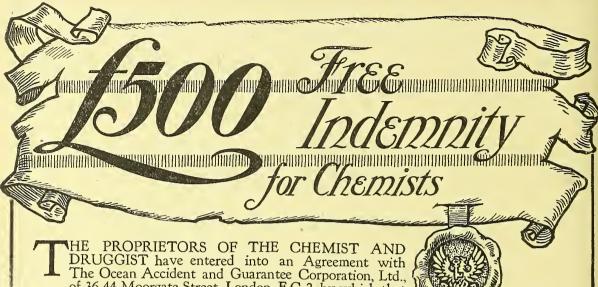
**Pocket Tins and Display Outers.** Pharmacists who prefer packed Pastilles have a choice of attractive designs—particulars on application.



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(a) Accidental bodily injury to or illness or death of any human being not in the service of or related to the Insured nor claiming compensation from the Insured under any Workmen's Compensation Act

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Caused by an error committed at premises to which the insurance applies by the Insured or by any person in the service of the Insured in:—

- (1) Compounding any medicine or selling by retail only any article usually sold by Chemists or Druggists.
- (2) Sight testing in ordinary course of business or selling by retail only spectacles or eyeglasses.

The £500 Free Indemnity applies to subscribers of 20/- to THE CHEMIST AND DRUGGIST who lawfully are carrying on the retail business of a pharmaceutical chemist, chemist and druggist, or registered druggist, in the United Kingdom, and who, if in Great Britain, are either

- (a) pharmaceutical chemists or chemists and druggists keeping open shop for the sale of poisons in accordance with the provisions of the Pharmacy Act 1868, as amended by the Poisons and Pharmacy Act 1908; or
- (b) executors, administrators or trustees of pharmaceutical chemists or chemists and druggists carrying on the business of chemists in accordance with the provisions of the Pharmacy Act 1868, as amended by the Poisons and Pharmacy Act 1908; or
- (c) bodies corporate, and in Scotland firms or partnerships, carrying on the business of chemists in accordance with the provisions of the Poisons and Pharmacy Act 1908; or
- if in Ireland, are

pharmaceutical chemists keeping open shop for dispensing and for the sale of poisons, or are chemists and druggists or registered druggists keeping open shop for the sale of poisons in accordance with the provisions of the Pharmacy Act (Ireland) 1875, or the Pharmacy Act (Ireland) 1875 Amendment Act 1890, as amended by the Poisons and Pharmacy Act 1908.

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The highest grade—good, clean, absorbent cotton. It is all cotton, and no waste enters into its manufacture. It is on the P.A.T.A. List, giving the Pharmacist a good profit, and the Public sound value for money.

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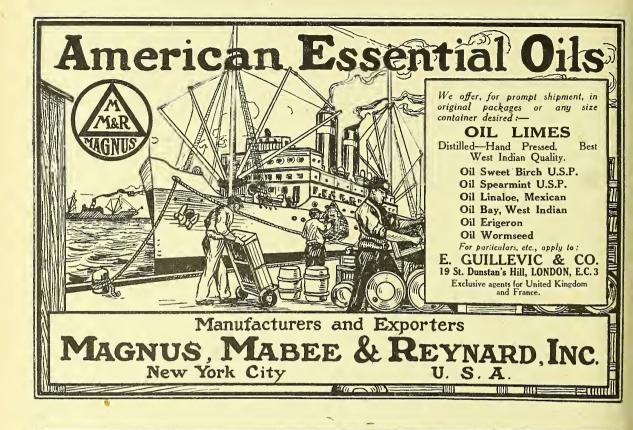
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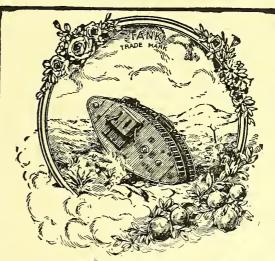
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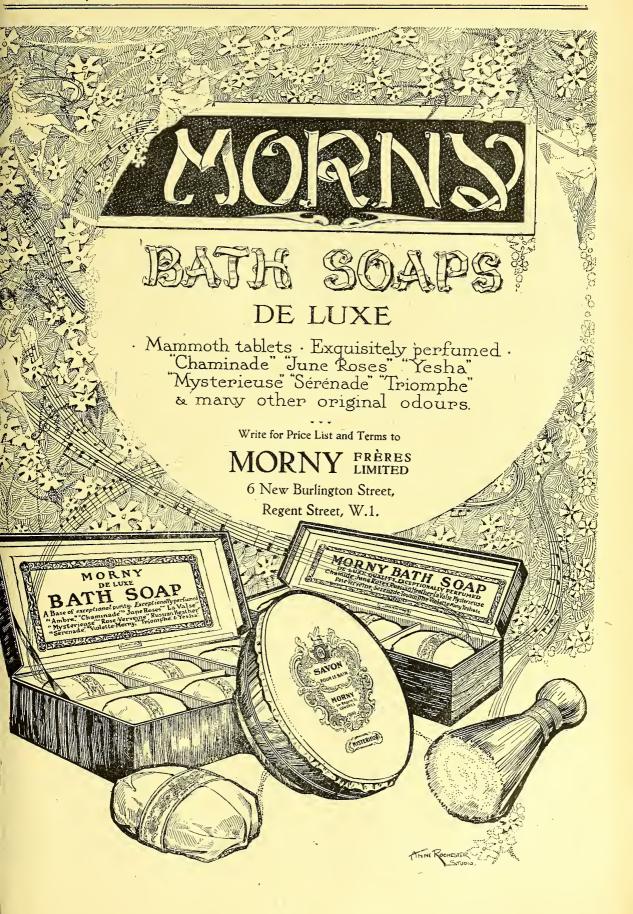
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Paul Poiret's Rosine Perfumes

Pierrot		27/6	retail
Espalier du Roy Hand-painted (4 Cologne)		35/- 25/6	"
(1 Lavender)	•••	24/6	11
Discount 33 <sup>1</sup> / <sub>3</sub>	%		



Masterpiece (Patent, Travelling)
SHAVING BRUSHES Leading SIMMS' Set-in-Rubber BRUSHES: 7/6, 13/6, 15/6 and 17/6 retail Discount 331 %



Beaverpufs

**W** Nupuffs

Dainty Leather and Fur Puffs, in attractive display boxes

4/6 retail

36/ dozen

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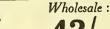
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A big vigorous impressive advertising campaign, covering the whole of the British Isles, is now being pursued. A vastly increased volume of business is inevitable. Generous profit to the trade has been arranged.



THE HAIR GROWER Price 2/9

Wholesale:

PER DOZEN.



FOR GREY HAIR Price 4/6

GEO. R. SIMS' HAIR RESTORER CO. 5 Great Queen St., Kingsway, LONDON, W.C.2,

## TO PUFF MANUFACTURERS

\$\$ 18 common market from the common from the c

## GERARD HAMBIS,

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SWAN & GEESE SKINS (Stocks in London). Ask for prices of the new season's skins.
All skins absolutely wnite.

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Bone mounts and rings for Powder Puffs.

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Velvet Wool and Cotton for Rouge Pads.



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The cheap imitation of a shaving brush, calculated to attract the unwary victim by its low price. Too often has the price been—DEATH.



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## **WEST**





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A rubber-set brush sent us for repair. The base of the handle has shrunk too small to fit the top. The rubber setting perished to repair without returning to U.S.A. Disappointed user presented brush—Verb. sap! After a journey round the world to find a BRUSH, it will be found

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Are known the World over as the Largest Manufacturers of

Please write for full Particulars to-

18/- each

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Manicure and Brush Cases and Sets-Mirrors in Ebony, Xylonite, &c.-Hair Brushes-Shaving Outfits-Baby Toilet Sets-Mounted Hair Ornaments, &c. A FEW LINES OF SPECIAL VALUE.

1067.—Leatherette satin-lined case, fitted pin box, grained xylonite concave back hair brush, 6×4 mirror,

and dressing comb to match 1653.—Shaving set, nickel-plated base and adjustable 6 in. reversible mirror, plain and magnifying,

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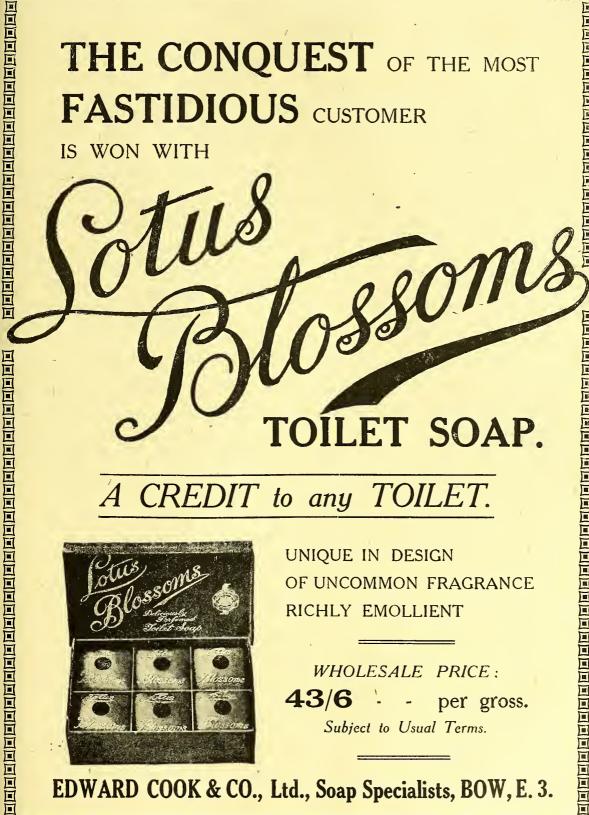
boxes, and nail crayon in case ... 1049.—Manicure case, leather wallet shape, containing scissors, bone handle cuticle knife and file, two

nail sticks, celluloid polisher, powder box, and emery boards in case ...
"THE HOUSE FOR TOILETS"— 8/6 each

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Subject to Usual Terms.

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PILENTA SOAP				Price per doz.	Selling Price
PROLACTUM For the lips.  PARSIDIUM JELLY For wrinkles.  ALLACITE of ORANGE A dressing cream. BLOSSOM  BORANIUM A hair tonic.  SILMERINE Hair curling fluid.  CLEMINITE For a face lotion.  COLLIANDUM For a face tint.  PERGOL A deodorant.  STALLAX For a shampoo.  JETTALINE For clearing the skin.  PHEMINOL A depilatory.  TEKKO PASTE Camphor cream.  MENNALINE For the eyelashes,  MERCOLIZED WAX A face cream.  STYMOL For oily complexions and blackheads.  BARSYDE Dandruff eradicator.  TAMMALITE For grey or faded hair.  LIQUID PERGOL For whitening the hands.  COCONOIDS For figure development.  HARAPOSA  1/- 10/- 10/- 11/- 10/- 10/- 10/- 10/-	PILENTA SOAP	•			
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PARSIDIUM JELLY - 10/- For wrinkles.  ALLACITE of ORANGE		•	-	101-	1/-
ALLACITE of ORANGE    A dressing cream. BLOSSOM  BORANIUM	PARSIDIUM JEL	LY	•	10/-	1/-
BORANIUM A hair tonic.  SILMERINE Hair curling fluid.  CLEMINITE For a face lotion.  COLLIANDUM For a face tint.  PERGOL A deodorant.  STALLAX For a shampoo.  JETTALINE For clearing the skin.  PHEMINOL A depilatory.  TEKKO PASTE Camphor cream.  MENNALINE For the eyelashes.  MERCOLIZED WAX A face cream.  STYMOL For oily complexions and blackheads.  BARSYDE Dandruff eradicator.  TAMMALITE For grey or faded hair.  LIQUID PERGOL For whitening the hands.  COCONOIDS For figure development.  HARAPOSA  - 22/6 2/6 2/6 2/6 2/6 2/6 2/6 2/6 2/6 2/6	ALLACITE of ORA			22/6	2/6
A hair tonic.  SILMERINE  Hair curling fluid.  CLEMINITE  For a face lotion.  COLLIANDUM  For a face tint.  PERGOL  A deodorant.  STALLAX  For a shampoo.  JETTALINE  For clearing the skin.  PHEMINOL  A depilatory.  TEKKO PASTE  Camphor cream.  MENNALINE  For the eyelashes,  MERCOLIZED WAX  A face cream.  STYMOL  For oily complexions and blackheads.  BARSYDE  Dandruff eradicator.  TAMMALITE  For grey or faded hair.  LIQUID PERGOL  To check excessive perspiration locally.  BICROLIUM  For whitening the hands.  COCONOIDS  - 31/6 3/6  For figure development.  HARAPOSA  - 22/6 2/6  5/6  5/6  5/6  5/6  5/6  5/6  5/6		BLO	2201AT	22/6	2/6
Hair curling fluid.  CLEMINITE 22/6 2/6  For a face lotion.  COLLIANDUM 22/6 2/6  For a face tint.  PERGOL 22/6 2/6  A deodorant.  STALLAX 22/6 2/6  For a shampoo.  JETTALINE 31/6 3/6  For clearing the skin.  PHEMINOL 36/- 4/-  A depilatory. TEKKO PASTE - 22/6 2/6  Camphor cream.  MENNALINE - 36/- 4/-  For the eyelashes.  MERCOLIZED WAX - 31/6 3/6  A face cream.  STYMOL - 36/- 4/-  For oily complexions and blackheads.  BARSYDE 22/6 2/6  Dandruff eradicator.  TAMMALITE - 22/6 2/6  Dandruff eradicator.  TAMMALITE - 22/6 2/6  For grey or faded hair.  LIQUID PERGOL - 31/6 3/6  For grey or faded hair.  LIQUID PERGOL - 31/6 3/6  For whitening the hands.  COCONOIDS - 31/6 3/6  For figure development.  HARAPOSA 22/6 2/6			-	22/0	2/0
CLEMINITE For a face lotion.  COLLIANDUM For a face tint.  PERGOL A deodorant.  STALLAX For a shampoo.  JETTALINE For clearing the skin.  PHEMINOL A depilatory.  TEKKO PASTE Camphor cream.  MENNALINE For the eyelashes.  MERCOLIZED WAX A face cream.  STYMOL For oily complexions and blackheads.  BARSYDE Dandruff eradicator.  TAMMALITE For grey or faded hair.  LIQUID PERGOL To check excessive perspiration locally.  BICROLIUM For whitening the hands.  COCONOIDS For figure development.  HARAPOSA  22/6 2/6 2/6 2/6 2/6 2/6 31/6 3/6 3/6 3/6 5-6 5-6 5-6 5-6 5-6 5-6 5-6 5-6 5-6 5-		-	-	22/6	2/6
For a face lotion.  COLLIANDUM - 22/6 2/6  For a face tint.  PERGOL - 22/6 2/6  A deodorant.  STALLAX - 22/6 2/6  For a shampoo.  JETTALINE - 31/6 3/6  For clearing the skin.  PHEMINOL - 36/- 4/-  A depilatory. 2  TEKKO PASTE - 22/6 2/6  Camphor cream.  MENNALINE - 36/- 4/-  For the eyelashes.  MERCOLIZED WAX - 31/6 3/6  A face cream.  STYMOL - 36/- 4/-  For oily complexions and blackheads.  BARSYDE - 22/6 2/6  Dandruff eradicator.  TAMMALITE - 22/6 2/6  Dandruff eradicator.  TAMMALITE - 22/6 2/6  Dandruff eradicator.  TAMMALITE - 22/6 2/6  For grey or faded hair.  LIQUID PERGOL - 31/6 3/6  To check excessive perspiration locally.  BICROLIUM - 22/6 2/6  For whitening the hands.  COCONOIDS - 31/6 3/6  For figure development.  HARAPOSA - 22/6 2/6				2016	ole
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For a shampoo.  JETTALINE				22/0	2/0
JETTALINE - 31/6 3/6 For clearing the skin.  PHEMINOL - 36/- 4/- A depilatory.  TEKKO PASTE - 22/6 2/6 Camphor cream.  MENNALINE - 36/- 4/- For the eyelashes.  MERCOLIZED WAX - 31/6 3/6 A face cream.  STYMOL - 36/- 4/- For oily complexions and blackheads.  BARSYDE - 22/6 2/6 Dandruff eradicator.  TAMMALITE - 22/6 2/6 For grey or faded hair.  LIQUID PERGOL - 31/6 3/6 To check excessive perspiration locally.  BICROLIUM - 22/6 2/6 For whitening the hands.  COCONOIDS - 31/6 3/6 For figure development.  HARAPOSA - 22/6 2/6		•	-	22/6	2/6
For clearing the skin.  PHEMINOL		_	_	31/6	3/6
A depilatory. © TEKKO PASTE	For clearing the skin.		•		0,0
TEKKO PASTE		•	•	36/-	4/-
Camphor cream.  MENNALINE				22/6	2/6
For the eyelashes,  MERCOLIZED WAX - 31/6 3/6  A face cream.  STYMOL - 36/- 4/-  For oily complexions and blackheads.  BARSYDE - 22/6 2/6  Dandruff eradicator.  TAMMALITE - 22/6 2/6  For grey or faded hair.  LIQUID PERGOL - 31/6 3/6  To check excessive perspiration locally.  BICROLIUM - 22/6 2/6  For whitening the hands.  COCONOIDS - 31/6 3/6  For figure development.  HARAPOSA - 22/6 2/6					_,0
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A face cream.  STYMOL 36/- 4/- For oily complexions and blackheads.  BARSYDE 22/6 2/6  Dandruff eradicator.  TAMMALITE - 22/6 2/6  For grey or faded hair.  LIQUID PERGOL - 31/6 3/6  To check excessive perspiration locally.  BICROLIUM 22/6 2/6  For whitening the hands.  COCONOIDS - 31/6 3/6  For figure development.  HARAPOSA 22/6 2/6		Δ¥	_	31/6	3/6
For oily complexions and blackheads.  BARSYDE 22/6 2/6  Dandruff eradicator.  TAMMALITE 22/6 2/6  For grey or faded hair.  LIQUID PERGOL - 31/6 3/6  To check excessive perspiration locally.  BICROLIUM - 22/6 2/6  For whitening the hands.  COCONOIDS - 31/6 3/6  For figure development.  HARAPOSA 22/6 2/6		****	_	0.70	0,0
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For figure development. HARAPOSA 22/6 2/6		as.	_	31/6	3/6
	For figure development	t.	-		
		•	-	22/6	2/6
STOCKED BY ALL WHOLESALE HOUSES	Nut oil shampoo.	1 14/1	JOI ES	ALE NO	Here

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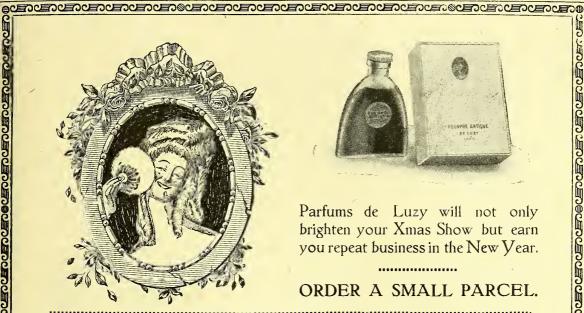
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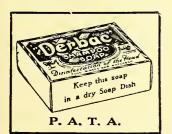
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It is the formula of Mr. Wilfred Hill, principal of the County Chemical Company, Birmingham.

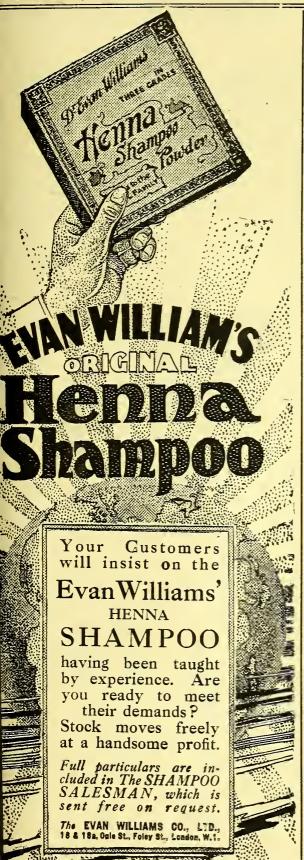
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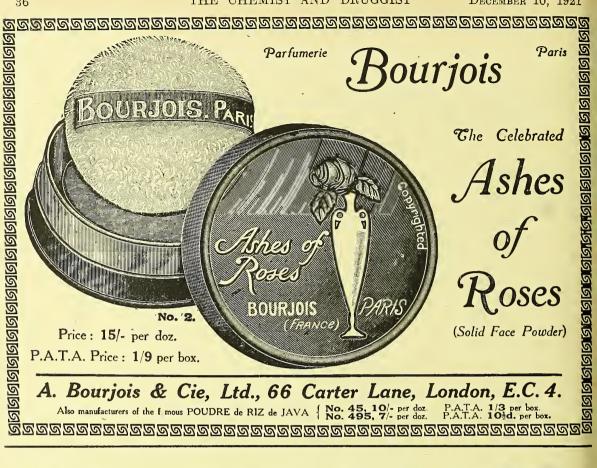
# Something more than a quick seller

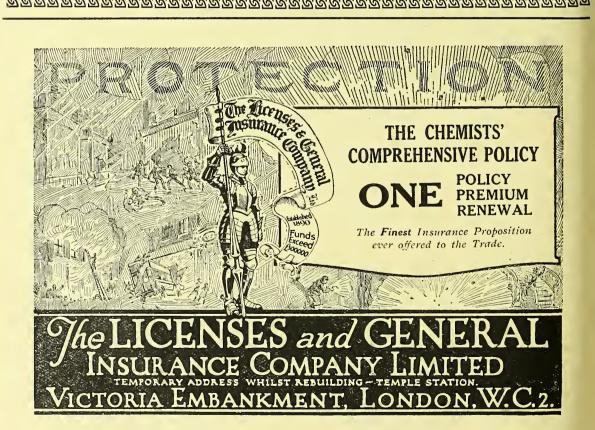
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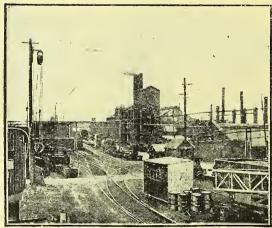
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THE CHEMIST AND DRUGGIST is in circulation and reputation the leading journal addressing the Chemical and Drug trades in the British Empire and other countries in the Old and New Worlds. It is the official organ of the Pharmaceutical Society of Ireland, the Chemists' and Druggists' Society of Ireland, and of other Chemists' Societies in the Overseas Dominions.

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# "C. & D." Retail Price List

THE CHEMIST AND DRUGGIST has always been noted for the complete information that it gives week by week of the changes in first-hand costs of drugs and chemicals. It has been frequently suggested to us, however, that we do not in this way fill completely the requirements of the retail chemists, who form such a large proportion of our readers, in that no direct indication appears of the alterations that should be carried out in retail prices. It is true that each month the changes in the Insurance Drug Tariff are noted, but these are not in a form adapted for retail use. We have now resolved to issue, with the first number of the New Year, a retail price list, which we shall endeavour to make a thoroughly trustworthy guide to retail prices, and a basis upon which dispensing charges can be founded. The list will be produced on definite costing principles, and being distributed without extra charge with the C. & D., will be assured of a unique and extensive circulation. Our desire is to benefit the retail drug-trade by producing an impartial list that will tend to standardise retail prices, and so assist in removing the reproach of uncertainty and variation that is often made by the public regarding chemists' prices. The list is in active preparation, and will be first issued with the C. & D. for January 7, 1922.

# English and Welsh News

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this or other news sections of the "C. & D."

Sale of Food and Drugs Acts

The report of the medical officer of health for the City of London covering the four weeks ended November 12 mentions that a sample of boric acid ointment taken during the period was found to be 10.4 per cent. deficient in boric acid. The vendor has been cautioned.

The medical officer of health for Newport, Mon., has informed the local grocers association that informal samples of seidlitz powders had been taken recently for analysis from several local grocers' shops, and the result of the examination had proved that none of the powders complied with the requirements of the British Pharmacopæia. The analyses showed the following results: Sample No. 1—Sodium bicarbonate, 10 per cent. deficiency; sodium potas. tartrate, 6.6 per cent. deficiency; tartaric acid, 10 per cent. deficiency. Sample No. 2-Sodium bicarbonate, 300 per cent. excess; sodium potas. tartrate, 100 per cent. deficiency; tartaric acid, 50 per cent. deficiency. Sample No. 3—Sodium bicarbonate, 10 per cent. deficiency; tartaric acid, 30 per cent. deficiency. The association has advised its members to withdraw the powders from sale

# National Scheme for Disabled Men

A communication issued by the Ministry of Labour points out that a review of all undertakings which have been in operation for one year or more in connection with the Government scheme for disabled ex-Service men has been rendered necessary. The certificates under the scheme were renewable annually, and injustice might be caused to contracting firms which are not on the King's National Roll if the advantages provided by the Government decision were given to firms whose certificates under the national scheme had expired. It has been decided by the Ministry of Labour that renewals for a further period of two years, instead of one, should now be asked for. Invitations to firms to renew their undertakings will be issued by the local employment committees. A new regulation provides that an employer is entitled to count in his quota any ex-Service man still in his employ who was in receipt of a disability pension at some time or other while employed by him, but has since ceased to receive the pension. So far the names of 29,000 employers of labour have been inscribed; their undertakings cover approximately 365,000 disabled ex-Service men.

# Commercial Travellers' Benevolent Institution

From the seventy-second annual report of the Commercial Travellers' Benevolent Institution, to be presented at the forthcoming annual meeting on December 29, we learn that the total income for the year was \$27,326, compared with £19,394 in 1920, and the total expenditure £21,434, compared with £20,236. The following tribute to Mr. A. Seneschall (Brand & Co. Ltd.) will interest readers of the C. & D. :

Best thanks are again tendered to the chairman of the Board. Mr. Seneschall was the unanimous choice of his colleagues to the onerous position he now occupies, and he has not spared himself in his endeavour to maintain those high traditions which have been associated with the chairmanship of this Institution ever since its foundation in 1849. He has been a tower of strength to the Institution during the past eight years, and the Board congratulates the Governors on the ability, experience, and integrity of the gentleman who presides over the deliberations of your

The services of the Press in advancing the interests of the Institution are also acknowledged. The number of annuitants at present on the books is 480.

Shopping Weeks

Several retailers in Morecambe, among whom may be mentioned Mr. F. N. Whitehead, Ph.C., have combined to form a Christmas shopping festival. Competitions in connection with window-displays are being held for the public.

The National Cash Register Co., Ltd., 225 Tottenham Court Road, London, W.1, inform us that, knowing the difficulties of organising shopping weeks, the company has compiled a lecture, illustrated by lantern-slides, which explains in detail the ideas which go to make up a successful carnival. This lecture will be given to any traders' association without charge.—Details of an organisation plan for shopping week may also be obtained free of charge by secretaries of chambers of commerce from E. J. Burrow & Co., Ltd., 93 Kingsway, London, W.C. 2.

#### An Unsolicited Testimonial

During the hearing of a Workmen's Compensation Act claim in the Shoreditch County Court, on December 6, before Judge Cluer, it was mentioned by a medical man that he advised a patient to use his arm as much as possible, as he had neuritis. Judge Cluer: Beastly advice. I was told to use dumb-bells, but I wasn't such a fool as to follow the advice. There was nothing to rub in?—The doctor: I ordered massage. Judge Cluer: When you are gone I will give him some good advice. (Laughter.) Later the doctor referred to the excruciating pain of rheumatism in the knee. Judge Cluer: And then you apply some Antiphlogistine—don't send for a doctor—and then you get well. (Laughter.) His honour subsequently informed a C. & D. reporter that he had tried it and found it excellent for relieving pain, although the method of applying it, boiling hot, was distinctly painful.

#### Fires

The following outbreaks of fire have been recorded since our last report:

The overheating of a boiler caused an outbreak, on December 4, in the establishment of Kodak, Ltd., photographic-apparatus manufacturers, Kingsway, London, W.C. 2.

A fire broke out on December 5, owing to the friction of machinery, at the premises of Mr. R. A. Collier, woodwool manufacturer. Nuttail Street, London, N. 1. The damage was not extensive.

An outbreak of fire in the building occupied by Barthés-Roberts, Ltd., cork merchants, Leman Street, London, E. 1, on December 3, is attributed to a defective electric circuit. The damage was slight.

The fire brigade was called to the premises of Evans Sons Lescher & Webb, Ltd., 60 Bartholomew Close, London, E.C. 1, on November 30, to extinguish a blaze on the second floor. The damage was not serious.

#### Poisonings

The following cases of fatal poisoning have been recorded since our last report:

At Clapton, London, Harriett Sparks (61) died from the effects of spirit of salt taken last August while of unsound mind.

An overdose of cocaine, used by misadventure, was declared to be responsible for the death of Mrs. B. E. Smith, Great Bradfield Lodge, Essex, at the inquest held on December 2. A medical witness is reported as saying: "There have been cases where doctors have given, with fatal results, what they thought to be a safe dose [of cocaine]."

Margaret Blance (18), who lived with her parents at Bootle, recently purchased 1 oz. of salt of lemon from the shop of W. T. Warhurst, Ltd., on the pretext of removing stains from linen. The packet was duly labelled. The young woman subsequently took a portion of the salt of lemon in tea, with a fatal result. An "Unsound mind" verdict was given at the inquest.

# Birmingham

B. C. Tipper & Son, manufacturing chemists, Balsall Heath, have contributed £8 3s. to the "Birmingham Mail" Christmas-tree fund.

The chemical-apparatus department of Southall Bros. & Barclay, Ltd., is to be demolished in order to make room for a "Hall of Memory."

An illuminated address was presented to the ex-Lord Mayor, Alderman W. A. Cadbury, on December 6, on behalf of the City Council, by Alderman F. C. Clayton, Ph.C., the senior member.

A warning has been issued by the local Association concerning the existence of forged prescriptions, which apparently conform with all the requirements of the Dangerous Drugs Act Regulations, made out for hypodermic tablets of a morphine salt.

# Liverpool

Mr. James Broad, who has had considerable practical experience and qualified in 1920, has opened a pharmacy in Wavertree Road.

The attendances at the Liverpool Chemists' Association meetings are being well maintained, and the membership continues to grow.

After three months' sojourn in Southern counties Mr. E. G. Hodges, the veteran *locum tenens*, has returned home, but is laid up with a chill.

A son of Mr. J. L. Hirst has received, for the second year in succession, the sole prize for drawing at the Liverpool College, the city's leading secondary school.

J. H. & S. Johnson, wholesale druggists, Whitechapel, have opened a photographic department, and have circularised pharmacists that they are ready to execute orders.

A prediction: "The time will come when the Liverpool branch of the R.P.U. will have the local distribution of proprietaries and patents." The author of this forecast remains anonymous.

According to the local Press, some amount of feeling has been caused by the dismissal of an old employee of Evans Sons Lescher & Webb, Ltd., and what is described as "a mass meeting" has been held with reference to the matter.

The late Mr. George Foggan, Bedlington, to whom a tribute is paid on p. 53 of this issue, was a popular figure at the British Pharmaceutical Conference at Liverpool in 1920. Amid the rush of the week he remarked, "I am growing too old for conferences."

The Alpass Masonic Benevolent Institution (a memorial of Horace Seymour Alpass, pharmacist, The Dingle, Liverpool, who died some thirty-five years ago) has held a festival at Southport for thirty years. Next spring it will be held, on an unprecedented scale, at Blackpool.

The exigencies of the telegraphic service unfortunately reduced Mr. R. H. West's paper given at the recent meeting of the Liverpool Chemists' Association (C. & D., December 3, p. 61) to vanishing-point. Mr. West's pharmacy at Southport is an interesting one, having a garden or forecourt between it and the road. Opposite was found, some fifty years ago, the famous Birkdale skull.

In Liverpool County Court, on December 5, Stephen McGuinness, fireman in the White Star liner "Celtic," who suffered from arsenical poisoning contracted through drinking water on a voyage from Liverpool to New York in August (C. & D., November 26, p. 48), was awarded £35 damages and costs. It was stated that thirty other firemen had actions pending against the company, and a stay of execution was granted. Judge Thomas, in giving his decision, said it was contended that some malicious person had deliberately poured arsenic down the pipes, but according to that theory there must have been two distinct acts of poisoning on that and the previous voyage. He thought that view was inconclusive, and the company had not established to his satisfaction the contention that the arsenic was wilfully introduced.

# Manchester

A smart and up-to-date pharmacy has recently been opened in Peter Street, Manchester (next to the Gaiety Theatre), by Mr. Jack Lever, chemist and druggist, late of Manchester University. In the very midst of theatreland, it is an additional attraction to the patrons of amusements.

A score of pharmacists gathered at the Midland Hotel on November 30 to honour Mr. G. A Mallinson, secretary of the Retail Pharmacists' Union. At the luncheon Mr. A. Hershberg, chairman of the Manchester branch, presided. After the loyal toast, Mr. Hershberg paid a very high tribute to Mr. Mallinson and his wonderful success. They were all very proud in Manchester of Mr. Mallinson, he said, and had always followed his career with great interest. Mr. Mallinson, in a felicitous speech, thanked the company for the compliments they had paid him, and assured them that he would never forsake pharmacy. He would have no compunction, he added, in going back into a pharmacy of his own again.

By the death of Mr. William Lane (C. & D., December 3, p. 53) pharmacy loses one of its stalwarts. A director of James Woolley, Sons & Co., Ltd., for many years, he was loved and respected as one of the straightest men in the trade. The Manchester Pharmaceutical Association, of which he had been a member for a considerable period, have lost a valuable supporter. His voice was not often heard, but when he had anything to say his judgment was always sound and decisive. The following officers and councillors of the Association paid their last tribute of respect to an esteemed colleague on December 2: Mr. T. E. Eastwood (President), Mr. John Cleworth (Vice-President), Mr. A. J. Pidd (treasurer), Mr. T. Miller (secretary), Mr. F. W. Bates, J.P., Mr. A. L. Blain, Mr. D. Dickson, Mr. W. Kirkby, M.Sc., and Mr. Flint.

#### Sheffield

There is a mild epidemic of influenza here, and the odour of eucalyptus pervades the atmosphere.

The influence of Government grants is reflected in the large number of degrees granted this year by Sheffield University.

A copy of the cash-book drawn up for members of the Retail Pharmacists' Union may be inspected at the office of the secretary of the local branch.

Sheffield chemists welcome the efforts of the local Chamber of Commerce to obtain a Sunday postal collection: the present arrangement is very harassing to a "special-order" trade.

In our reference to a borax prosecution in our last week's issue (p. 42), it should have been mentioned that the defendant was ordered to pay £3 8s. costs, no conviction being recorded against him.

The Ucal window-display competition, in which Mr. J. T. Appleton acted as judge, resulted in the first and second prizes being awarded to Messrs. J. Clark & Co., West Street, and Mr. J. H. Wright, Crookes, respectively.

The Sheffield Pharmaceutical Committee's protest at not having a pharmacist representative on the North-East Midland Joint Pricing Committee has resulted in the appointment of Mr. J. T. Appleton, he being the fourth chemist member of the latter Committee.

It appears that the cough-mixture referred to in this column of our last week's issue is being more generally displayed than we had thought: we learn that several other firms are making a similar window-show, collectively constituting a capital advertisement for William Fox & Sons, Castle Street, the manufacturers.

#### Miscellaneous

In the Courts.—At Birkenhead, on November 30, Yang Hee, ship's fireman, was fined £10, plus 21s. interpreter's fee, for concealing 4 oz. of morphine hydrochloride on board the s.s. "Calchas."—At West Ham Police Court, on December 1, Kemp Lockwood, described as a consulting chemist, was committed for trial on charges of forging a certificate of death and making false entries in a ship's log, a charge of pretending to be a medical man (C. & D., December 3, p. 43) being adjourned sine die.—At Dover, on December 2, Mrs. Beth Howe, giving an address in Westminster, London, S.W., was fined £4 2s. 4d. for illegally importing cordials and perfumery. It was stated in evidence that, when detained, the accused smashed a bottle of perfume and used abusive language. An additional fine of £1 was imposed in respect of the smash.—At Westminster Police Court, on December 7, Francis William Fitzgerald (38), Earlham Grove, E. 7, a member

of a firm of chemical merchants, was remanded without bail on a charge of conspiring with others to steal guns and ammunition from barracks at Chelsea and Windsor.

AN UNWANTED TONIC.—At Thames Police Court, on December 7, Richard Wills, captain, Gravesend, was fined £5 for discharging "boxes of bottles" into the estuary of the Thames. The prosecuting solicitor said it appeared that certain bottles of tonic—he did not know what the tonic was—were consigned in wooden boxes from Buenos Ayres to this country, and thence to India. The people in India refused to accept the goods, owing to the difference in exchange, and the boxes and bottles were brought back to this country. Then a question arose whether further duty was payable, and ultimately it was arranged that the stuff should be destroyed.

# Irish News

### Pharmaceutical Society of Ireland

The latest dates for lodging applications for the examinations in January 1922 are as follows: For the Preliminary examination, January 22, 1922; for the Registered Druggist examination, January 28, 1922; for the Pharmaceutical Licence examination, January 28, 1922; for the Pharmaceutical Assistant examination, January 2.

#### Belfast

The employees of Thomas McMullan & Co., wholesale druggists, Victoria Street, Belfast, who recently presented to Mr. T. W. McMullan, M.P., one of the principals, an illuminated address to mark his election to the Northern Parliament (*U. & D.*, October 22, p. 43), were invited on December 2 by Mr. and Mrs. McMullan to a dinner at Thompson's Restaurant. During the evening appropriate speeches were delivered, and an enjoyable musical programme was contributed by various artists.

In the Northern Irish House of Commons on December 1, Mr. James Cooper asked the Minister for Home Affairs if he was aware of the extensive and increasing practice of drinking methylated spirits, and whether the Government is prepared to introduce immediate legislation to have sellers of such spirits licensed, and to have all spirits exposed for sale mixed with other ingredients to render the spirits unfit for drinking. Sir Dawson Bates replied: I am informed by the police that, so far as they are aware, there has been no recent increase in the drinking of methylated spirits, and an Inland Revenue licence is required for the sale by retail of methylated spirits. The suggestion in the concluding part of the hon, member's question might be attended with considerable danger, and would need the most careful consideration.

A Committee meeting of the Ulster Retail Drug Trade Association was held on December 5, Mr. W. E. Wilson (Vice-President) in the chair. Other members present were Messrs. J. Dundee, A. J. Bingham, W. C. Dobbin, H. Crail, Wm. Macartney, J. C. Culbert, S. Suffern, J. Macauley, and the secretary. Correspondence was read from Glaxo, Ltd., stating that they have now been able to induce the proprietors of the "Belfast Telegraph" to refuse advertisements quoting Glaxo at 4s. 6d. per tin. The Committee considered this very satisfactory in so far as it relates to advertising in the Press, and hoped other advertisers of proprietary articles would adopt the same course where "cutting" has taken place. Discussion arose on recent reports and remarks by various bodies on the sale and drinking of methylated spirit. It was decided that a deputation from this Association should interview the Inland Revenue officer on the subject. Correspondence was also read from Fassett & Johnson, Ltd., J. Morgan Richards & Sons, Ltd., Wm. Redpath, Ph. C. (Ballymoney), Jas. Guthrie, and the Proprietary Articles Trade Association. The supply of patent medicines, foods, and toilet preparations indiscriminately at wholesale rates was again under consideration, and a sub-committee was appointed to confer with the Wholesale Merchants' Association (Druggists' Section) at their next meeting.

# Scottish News

#### Brevities

Principal J. C. Irvine lectured before a Dundee audience, on December 2, on "Some Aspects of a Chemist's Work in the War."

Mr. W. G. Reid, chemist and druggist, High Street, Wick, has acquired the business of Mr. J. R. MacRossen, chemist and druggist, 23 High Street, Tain.

Mr. W. E. Wilson, chemist and druggist, Hawick, has presented to the Ruskin Museum, Coniston, a copy of "Don Quixote," in three volumes in Spanish, which belonged to John Ruskin's father.

#### Edinburgh

Sticks of liquorice are figuring in several window-displays in the district.

The fad of the local youth about this season of buying glass tubes for pea-shooters has this year developed into a furore.

A man named Forsyth was sentenced to eighteen months' imprisonment at the Sheriff Court, on December 2, for assault and robbery of an Edinburgh chemist,

#### Glasgow

A paper, entitled "Some Recent Applications of Magnesium in Synthetic Organic Chemistry," was read by Mr. H. Hepworth, D.Sc., at a meeting of the Glasgow Section of the Society of Chemical Industry on November 28. The author gave an historical survey of the use of the Grignard reagent, the methods of applying it, and reviewed the theories of its action.

The Scottish Committee of the National Council for Combating Venereal Disease held a conference of representatives of local authorities in Glasgow on December 2. Several papers were read, attention being mainly directed to the steps already taken to deal with the disease and the need for further development. Doubts were expressed as to whether the efforts were proceeding on lines likely to achieve the desired results.

# Legal Reports

Wine-licence Case.—At Blackpool Police Court, on December 2, Mr. Alexander Shannon Galloway, chemist and druggist, Church Street, was summoned for selling intoxicants otherwise than during permitted hours. Police evidence was given to the effect that at 3.15 p.m. on the day in question a person was supplied with a bottle of Wincarnis by an assistant, Mr. Galloway being away on the Continent at the time. When spoken to the assistant said that he must have taken the bottle from the wrong fixture. Mr. Robinson, who appeared for the defence, admitted the sale, and added that the defendant had admonished the assistant for serving the wine. A fine of £5, with costs, was imposed.

"Dangerous" Drugs Register Prosecution.—At Knaresborough Petty Sessiens, on November 30, Mr. Henry Arthur Chipperfield, chemist and druggist, High Street, Boroughbridge, was summoned for failing to produce a register of "dangerous" drugs when officially asked to do so. Mr. Douglas Green, who appeared for the defendant, pleaded "Not guilty." Mr. Green submitted that he had searched carefully through the Regulations and the Act, and there was nothing to show that any register should be kept of the goods in stock at the time the Act came into operation. Defendant fully intended to make a register, and to start it when he made his first purchase. His only transaction with the drugs was in the form of prescriptions. The chairman said that the Bench did not complain about the police bringing the case, but looking at the matter all round they had decided to dismiss it.

Norhin' doing.—Employer: "Now, then, boy, have you got nothing to do, or are you doing it?" Boy (indignantly): "I've been doing it all the time, sir!"

# New Companies

# and Company News

P.C. means Private Company and R.O. Reg stered Office:

Thomas Potts & Co., Ltd. (P.C.).—Capital, £1,000. Objects: To adopt an agreement with Ritchie Gill, and to sell all articles dealt in by chemists and druggists, among other traders mentioned. R.O.: 66 Victoria Street, London, S.W. 1.

STAR CHEMICAL Co., LTD. (P.C.).—Capital, £100. Objects: To carry on the business of chemists, druggists, oil and colour men, box-makers, etc. The first directors are: C. E. and C. W. F. Thomas, 125 Upper Clapton Road, N.E. R.O.: 364A Mare Street, Hackney, London, N.E.

Combe Down Drug Stores, Ltd. (P.C.).—Capital, £500. Objects: To carry on business as indicated by the title. The provisional directors are: Mrs. L. Jackson, Odd Down House, Bath, and F. L. Jackson, Byfield House, Combe Down, near Bath. R.O.: Byfield House, Combe Down, near Bath.

Brown, Gray & Co., Ltd. (P.C.).—Capital, £9,000. Objects: To carry on the business of manufacturing chemists' and druggists' sundriesmen, drug grinders, importers, exporters, makers of and dealers in proprietary articles, etc. The first directors are: J. Brown and J. Gray, wholesale druggists, 548 Argyle Street, Glasgow. R.O.: 548 Argyle Street, Glasgow. [Corrected notice.]

Thomas Evans & Son (Pendleton), Ltd. (P.C.).—Capital, £1,500. Objects: To take over the business of chemists and druggists, drug dealers, photographers and photographic-material printers, formerly carried on by T. Evans, in Whit Lane, Pendleton. The first directors are: H. N. Evans, 7 Whit Lane, Pendleton, and J. Jones, Claremont Road, Pendleton.

H. Motson & Co., Ltd. (P.C.).—Capital, £100. Objects: To carry on the business of chemists, druggists, opticians, stationers, teeth extractors and adaptors, patent-medicine proprietors and packers, etc. The first directors are H. Motson, 25 Pownall Crescent, Colchester; and J. R. Morris, 25 Pownall Crescent, Colchester, pharmacist. R.O.: 25 Pownall Crescent, Colchester.

REFINERIES & Co., LTD. (P.C.).—Capital, £10,000. Objects: To acquire the business of Skerman & Spinney and Spinney & Knight, and to carry on the business of wholesale and retail chemists and druggists, manufacturers of and dealers in chemicals and drugs, refiners, metallurgists, assayers, etc. Solicitors: Lloyd, Richardson & Co., 7 Henrietta Street, Covent Garden, London, W.C. 2.

Nobel's Drug Stores, Ltd.—D. W. Bull, 4 Churchill Road, Homerton, London, N., ceased to act as receiver or manager on September 18.

Lewis & Burrows, Ltd.—The report of the directors for the twelve months ended September 30, 1921, states that the company has again experienced a most satisfactory year's trading. A sum of £1,000 has been set aside out of profits to be added to the depreciation reserve account. The net balance available is £14,442 19s. 6d., out of which it is proposed to transfer £500 to taxation reserve account, to place £3,400 to the igeneral reserve account, a further £1,000 to depreciation reserve account, to pay a dividend at the rate of 6 per cent. per annum (less income tax) on the preference shares, and a dividend at the rate of 12½ per cent. per annum (less income-tax) on the ordinary shares, leaving a balance of £1,057 19s. 6d. to be carried forward. Upon the passing of the present accounts and the adoption of the report the reserve funds will stand at £20,052 2s. 10d. During the year the company acquired the ground lease of their premises at 17 Lavender Hill. The lease of the premises at 265 Finchley Road expired, and, being unable to arrange a renewal on suitable terms, the directors secured a substantial interest in an adjoining business with satisfactory results. Mr. J. K. Matterson retires by rotation from the board, and offers himself for re-election.

# The Keeping Properties of Aspirin and Aspirin Tablets

By A. J. Jones, Ph.C.

Some time ago a paper was published by the writer (C. & D., 1919, p. 402) dealing with the purity of commercial aspirin and aspirin tablets, and one or two suggestions were put forward with a view of defining commercial samples and keeping them as close to the theoretical standard of pure acetylsalicylic acid as seemed reasonable for technical attainment. The paper was concerned with the material as current in trade, and left out of consideration the keeping properties of the drug. But this is a very important point, and especially in connection with tablets, for it is the tablet form of the drug that is most in vogue, and is the one most likely to suffer in its different environments and storage.

In order to obtain some information on this subject samples were set aside in the same Liverpool laboratory and examined after a lapse of time. Some of the results obtained have appeared in "Evans' Journal" for 1919. In addition to these tests, samples of tablets were put up and despatched to various parts of the world, a corresponding sample being retained in store in Liverpool. The bottles on arrival at their destination were opened and examined by our representative, and then one set returned by mail; the duplicate set was retained for three months, and then, in its turn, posted back to the laboratory here. Unfortunately, in one or two instances the three months' stay was not effected, but the set, even as it stands, shows some interesting figures.

The comments upon the condition of the tablets when received abroad—and these were expressions of opinion as to the order of merit of each sample, as judged by cdours—show that such a method of evaluation is quite unreliable when dealing with tablets of ordinary good quality; for one sample was reported by two different observers as both the best and the worst of the set, and analysis showed it to be neither. That does not mean to say that the nose cannot be relied upon in forming an opinion of the condition of tablets, because the contrary is the case; but it does mean to say that when the tablet is in a normal condition, with only a small percentage decomposition—say, around 0.25 per cent. free salicylic acid—the nose may be misleading, and this can easily be understood.

Tablets which have been correct at the time of making, but which have subsequently decomposed, will very frequently exhibit minute glistering crystals of salicylic acid on their surface. This condition varies with the degree of decomposition, but it may be an important piece of evidence. If two tablets are found both giving a high percentage of free salicylic acid, and one has crystals upon the surface and the other has none, it is very strong presumptive evidence that the tablet not exhibiting crystals was wrong when first produced. These crystals were very distinct on the tablets returned from India and Central America, and the writer has seen the sides of a bottle, that had been carried for a year or two in a ship's chest, finely encrusted with long sparkling needles of salicylic acid.

In examining the table, it will be seen that each sample exported has suffered slight decomposition, and also a little more than the sample remaining in England. The effect of the stay in Central America is distinct. Although the "unbranded" sample was in bad condition to start with, it is worth noting that the increase in decomposition has not exceeded that in any of the other samples; in fact, in some cases it has been less.

Another point worth drawing attention to is the relationship between A (1) and A (2). Both acids were of British manufacture, and the tablets were made by Evans Sons Lescher & Webb, Ltd. A (1) gave analytical figures almost exactly theoretical, giving 100 per cent. by the acidity and 100.4 per cent. from the bromine figure, while A (2) contained an excess of combined salicylic acid, the figures being 98.13 per cent. from the direct acidity, 102.6 per cent. from the saponification figure, and 101 per cent. by bromine absorption.

The occurrence of acids of the last-named type was drawn attention to in the paper already referred to, and it was pointed out that such samples give turbid solutions with iron in the free salicylic-acid determination. Such aspirins usually contain less free salicylic acid than do the more normal varieties, and, when the B.P. test is applied, are frequently negative in reaction. This seems to be due to the interference of the impurity precipitating with iron (whatever it may be) rather than to an absolute freedom from free salicylic acid. It has been the opinion of the writer that these acids do not decompose quite so easily as the more normal varieties, and the trial of the two varieties in this series tends to confirm this view. There is no intention of emphasising this point unduly; the observation is recorded for what it may be worth.

In the original paper it was suggested that 0.2 per cent. of free salicylic acid in aspirin tablets would be a reasonable standard to adopt. The tables given in this article help to substantiate that figure, and they also bring out one or two other points for consideration. Judging from these results, the writer would suggest that it would be unduly restrictive to insist upon deliveries of tablets from the manufacturer being under 0.2 per cent. of free salicylic acid; that the manufacturer cannot be held responsible for deterioration occurring up to 0.4 per cent. unless such deterioration takes place within a period of, say, six months from delivery and under good conditions of storage in England; after six months, or under bad storage conditions, no responsibility should be accepted for deterioration. Where tablets are required for export, the table clearly shows that no single arbitrary standard can be maintained. Taking as examples C (branded) and A (1) to Central America, it is seen that the effect of exporting may be an increase of from 0.17 to 0.75 per cent. in excess of the deterioration that occurs during normal storage in England.

The remarks in this paper are based upon the examination of preparations made by reliable firms, who may safely be assumed to take every reasonable precaution for making their product satisfactory. But the writer would like to give this warning: it does not follow as a matter of necessity that the analysis of an aspirin tablet will reveal the precise characters of the drug as it originally entered into the composition of the mixture; the analysis is confined to the ingredient as extracted by the analyst, and in the process traces of impurities other than free salicylic acid, which would betray themselves in the drug when in its original condition, might easily escape detection. Hence, if an inferior tablet is prepared, and any reason for complaint is given to the patient taking it, there is the possibility that the cause of the trouble may be with the inferior product rather than be the result of slight and simple breaking down of the acid molecule. The best figures upon which to form a judgment of the quality of an aspirin tablet are, in the opinion of the writer, the acid, ester, and bromine absorption figures and the relationship they bear to one another, together with a determination of the free salicylic acid. A paper dealing with the decomposition of aspirin was read before the British Pharmaceutical Conference in 1919 (A. Nutter Smith). With regard to aspirin itself, when not in the form of tablets, consideration of the figures in Table I. clearly shows that to insist upon a negative reaction for free salicylic acid, using a test such as that given in the B.P., is to put forward a variable and impracticable demand. The proper thing to do is to agree upon a limit. Commercial houses can decide what their own limits shall be, and the writer has suggested that 0.15 per cent. is reasonable for current trade. But it is clear that a larger margin must be allowed for storage, and it would appear unreasonable to condemn a sample of aspirin, as being unsuitable for pharmaceutical use, that was found to contain 0.3 per cent. (or even perhaps 0.4 per cent.) of free salicylic acid. There is also very fair evidence that with good aspirin and ordinarily careful storage little danger of 0.3 per cent. being exceeded is to be feared. It should be understood, however, that the amount of free acid present is not the only criterion by which to judge a sample of the drug.

This paper is communicated from the laboratories of Evans Sons Lescher & Webb, Ltd., at Liverpool.

Note.—In the paper (C. & D., 1919, p. 402) under bromine value the figure 15 c.c. N/5 soda should read 50 c.c. And on p. 404, line 17 from the bottom, the figure 70 c.c. should read 60 c.c. It is unnecessary to use kaolin for filtration, except where some fatty excipient is used which otherwise would give a persistent turbidity to the filtrate.

#### TABLE I

# FREE SALICYLIC ACID IN

	T TOISIS (	OALICILIO II	CID IN	
(	1) Aspirin		(2) Aspir	IN TABLETS
First Test	After Four Months	After Ten Months	First Test	After Four Months
Per Cent.  0.2  0.075  0.05  0.125	Per Cent. 0·150 0·212 0·075 0·065 0·140	Per Cent. 0 175	Per Cent. 0·12 0·12 0·14 	Per Cent. 0·32 0·17 0·22 

(From "Evans' Journal.")

# FREE SALICYLIC ACID IN ASPIRIN AFTER LONG STORAGE

Sample	First Test	Tested 2½ years after the First Test	Remarks
	Per Cent.	Cent.	
A1	0.06	0.33	Odour sharp, but not acetous.
A 2	0.05	0.25	Odour good.
B	0.30	0.50	Odour good.
C	0.075	0.25	Practically no odour.
D	0.20	0.45	Odour slight, but disagree- able.
E1	0.175	0.25	Excellent condition. Stored in a 1-oz. cardboard carton.
E 2	0.15	0.25	Stored in corked bottle for 3 years 4 months.
F	0.125	0-15	This sample had a high - acid value as compared with the ester value.

## Samples with Combined Salicylic Acid in Excess of the Theoretical

G H I H 2 I 1		0·10 0·10 0·125 0·05 0·05	0·175 0·10 0·15 0·175 0·15	. <u>=</u>
12	•••	0.05	0.15	

# TABLE II

#### ASPIRIN TABLETS

Free Salicylic Acid Calculated as Percentage on the Aspirin Content

Sample	A (1)	A (2)	B Branded	C Branded	C Unbranded
First tested After 3 months in Liver-	0.06 0.08	0·14 0·16	0·11 0·14	0·10 —	0.46 0.46 (2 mths.)
After 20 months in Liver- pool	0.29	0.26	0.31	0.24	0.47
After export and return. The samples on return					
were stored in Liver- pool, until 20 months had passed from the				1	
time of the first test having been made,					
and then they were examined.					
To Canada—					
Quick return	0.34	0.34	0.36		0.54
With 3 months' stay To South Africa—	0.33	0.30	0.36	0.29	0.52
Quick return To Australia—	0.34	0.28	0.42	0.31	0.61
Quick return	0.50	0.34	0.43	0.40	0.69
With 3 months' stay	0.63			0.40	0.74
To India—				5 10	0.1
Quick return To Central America—	0.67	0.34	0.48	0.34	0.69
Quick return	0.54	0.39	0.54	0.41	0.69
With 3 months' stay	1.04	0.50	0.68	_	_

# The Irish Poisons Schedule

THE following Order in Council, dated November 8, 1921, approving a resolution of the Royal College of Physicians of Ireland amending the Schedule to the Poisons (Ireland) Act, 1870 (33 & 34 Vict., c. 26), has been published as S. R. and O., 1773, of 1921:

Whereas by an Act passed in the 33rd and 34th years of the reign of Her late Majesty Queen Victoria, entitled "" An Act to regulate the Sale of Poisons in Ledond"

"An Act to regulate the Sale of Poisons in Ireland," Section 1, it was enacted that the several articles mentioned in the Schedule A to the said Act annexed should be deemed to be poisons within the meaning of the said Act; and that the King and Queen's College of Physicians in Ireland might from time to time, by Resolution, declare that any article other than those mentioned in the said Schedule and in such Resolution named ought to be deemed a poison within the meaning of that Act; and thereupon the said College should submit the said Resolu-tion for the approval of Her Majesty's Privy Council in Ireland; and that if such approval should be given, then such Resolution and approval should be advertised in the "Dublin Gazette," and on the expiration of one month from such advertisement the article named in such Resolution should be deemed to be a poison within the meaning of that Act:

And whereas the King and Queen's College of Physicians in Ireland is, under Letters Patent passed under the Great Seal of Ireland, now called and known by the name of the Royal College of Physicians of Ireland:

And whereas the Royal College of Physicians of Ireland did, on the 4th day of March, 1921, resolve and declare, by virtue and in exercise of the powers vested in them, that-

(a) Coca, any preparation or admixture of, containing one or more per cent. of coca alkaloids;

(b) Ecgonine, and all preparations or admixtures containing 0.1 per cent. of ecgonine;

(c) Dpium, and all preparations or admixtures contain

ing 0.2 or more per cent. of morphine;

(d) Diamorphine (also known as heroin) and all preparations or admixtures containing 0.1 per cent. of diamorphine; should be deemed poisons and be added to Part I. of

Schedule A of the said Act to regulate the sale of poisons

And whereas the said College have submitted the said Resolution for the approval of His Majesty's Privy Council in Ireland, and the Privy Council are of opinion

that the said Resolution should be approved:

Now we, the Lords Justices and General Governors of Ireland, by and with the advice and consent of His Majesty's Privy Council in Ireland, by virtue and in pursuance of the powers vested in Us by the said Act, and all other powers Us thereunto enabling, do hereby order that the said Resolution as regards-

(a) Coca, any preparation or admixture of, containing

(b) Ecgonine, and all preparations or admixtures containing 0.1 per cent. of ecgonine;

(c) Opium, and all preparations or admixtures containing 0.2 or more per cent. of morphine;

(d) Diamorphine (also known as heroin) and all pre-parations or admixtures containing 0.1 per cent. of diamorphine; be approved.

# **Business** Changes

Boots, Ltd., are opening a branch at Dorking, Surrey. Mr. P. G. Dales, chemist and druggist, Stairfoot, has opened a business in Mapplewell.

EDUCATIONAL GIFTS.—The following donations for educational purposes are announced: Huntley & Palmers, Ltd., Reading, £10,000 to the Reading University College; J. S. Fry & Sons, Ltd., £2,500 to the Bristol University Appeal Fund.

# Pharmaceutical Society of Great Britain

Council-meeting

A MEETING of the Council was held at 16 Bloomsbury Square, London, W.C., on December 7, Mr. E. T. Neathercoat (President) in the chair. The absent members were Messrs. Campkin, Wolff, and Young.

The President intimated that there were no questions.

#### CONGRATULATIONS TO MR. ROWSELL

The President said that, before proceeding to the business, he was sure the members would wish to join with him in offering congratulations to Mr. Rowsell on his election to the Mayoralty of Exeter. Not only was his elevation to that office an honour received in his own country, but the city of Exeter was to be congratulated

country, but the city of Exeter was to be congratulated upon securing a gentleman with such a record of work in public life and for straight-dealing. (Hear, hear.)

Mr. Rowsell, in acknowledging the compliment, said that one of the most gratifying features in connection with his acceptance of the Mayoralty had been the congratulations which had come to him from his colleagues in pharmacy, not only in this country, but other countries as well. He was gratified to feel that he had the confidence of such colleagues. (Hear, hear.)

#### ELECTIONS AND RESTORATIONS

Two persons were elected members, and six were elected student-associates of the Society; several persons were restored to the Society, and one was restored to the Register. The registrar reported there had been seventynine registrations of apprentices as students since the last meeting.

### SUPERINTENDENTS OF EXAMINATIONS

The following were appointed superintendents and deputy-superintendents respectively of written examinations:

London, E. White, H. Moon; Edinburgh, James Nesbit, D. McEwan; Manchester, C. Swinn, R. F. Swinn.

# Correspondence

A letter was read from the Public Pharmacists' Association, enclosing a resolution of thanks to the President for his efforts on behalf of pharmacists in the poor-law service on the occasion of his recent interview with Mr.

Francis, of the Ministry of Health.

The Joint Board of Scientific Societies wrote asking the Society to appoint a representative for the coming year. Mr. White was unanimously re-elected.

The secretary of the National Association of Women

Pharmacists wrote thanking the Council for allowing that

organisation to use the Society's premises on October 31.

A letter from the Director of the National Physical Laboratory, Teddington, stating that a conference on scientific glassware had been held on October 20, was read. In an accompanying report it was pointed out that steps were being taken to form a standardisation committee, and the Society was invited to lend support by the appointment of representatives to serve on that committee. When the names of representatives had been received, arrangements to convene the first meeting would be made, and it was hoped this would be possible during December. It was quite open to the constituent bodies to appoint more than one representative. A further letter expressed the hope that the Society would accept the invitation, and asked that representatives be appointed as soon as convenient.

In reply to the President, the assistant-secretary said the Chemical Society had two representatives on the new committee, but most of the bodies had only one. Mr. E. White and Professor H. G. Greenish were appointed to represent the Society.

#### EDUCATION COMMITTEE

The report of this Committee stated that, as the reguations for the Qualifying examination stand, the new syllabus comes into operation at the first examination to be held after October 31, 1922. In view of the number

of ex-Service students and others who are exempted from the regulations as to curriculum, provision has still to be made for the continuance of courses of nine-months' duration, during which the subjects for the whole examina-tion are taken. Representations had been made from the authorities of schools recognised by the Council that diffi-culties would arise if they were required to provide facilities during the session commencing in October next for students who carry on under conditions applicable to students registered before 1919. It was recommended that the coming into force of the new syllabus be postponed for a further year, the regulation dealing with the matter to read as follows:

"After October 31, 1923, and until further notice, the Qualifying examination shall be in accordance with the following syllabus, but candidates may elect to be examined in accordance with this syllabus at any exami-

nation held after July 31, 1920, until further notice."

The Committee considered certain applications for recognition under Part I. of the Qualifying examination regulations, and had approved the Accrington Technical School (for chemistry and physics), Bablake School, Coventry (for chemistry and physics), Rochdale Municipal Technical School (for chemistry and physics), and Walsall Municipal Institute (for botany). A report from the Aberdeen Pharmaceutical Association on the result of the examination conducted under the Petrie trust was considered, and Mr. A. C. Douglas was recommended to be awarded the benefits of the trust. The report was adopted without comment.

#### FINANCE COMMITTEE

The financial statement is summarised as follows: Receipts since the last meeting, including a balance of £321 15s., amounted to £3,626 10s., comprising the following items: Penalties and costs, £57 5s.; school-fees and deposits, £47 5s.; examination-fees, £661 17s.; registration-fees, £178 10s. confidence in facility of the following items. tion-fees, £178 10s.; certificates of qualification, £2 19s.; restoration-fee, £11s.; subscriptions, £381s, 3d.; "Pharmaceutical Journal" publishing department, £1,200; "Pharmaceutical Pocket-book," £25 9s. 1d.; pharmaceutical press publications, £5 18s. 2d.; Pharmaceutical Codex, 6s. 6d.; sale of Registers, 17s. 6d.; interest on investments, £84; sundry receipts, £1 5s. 6d.; transfer from deposit account, £1,000. After deducting £3,444 7s. 5d. for payments ordered at the last meeting £3,444 7s. 5d. for payments ordered at the last meeting, there was a balance of £182 2s. 7d. The other balances were: Benevolent Fund (current account), £109 13s. 5d.; Benevolent Fund (donation account), £6 10s. 10d.; War Auxiliary Benevolent Fund, £29 9s. 11d.; Orphan Fund, £6 17s 10d. The report recommended that accounts amounting to £4,740 14s. 8d. be paid, and that the action of the secretary in making payments amounting to £639 17s. 9d. be approved.

The treasurer said that the Committee had spent most of their time in going into the whole of the Society's investments, but the report was not quite ready; it was hoped to submit it at the January meeting.

The report was adopted without discussion.

# Benevolent Fund

The report of this Committee recommended that a grant of £5 should be made to each annuitant of the fund as a

Christmas gift.

Miss Buchanan announced the following special conthis Buchanan announced the following special contributions to the fund: Atkinson Bros., Southend (weighing-machine), 16s.; T. O. Barlow, Southsea (box), £1 ls.; A. W. Cornish, Bristol, 7s. 10d.; Francis & Co., Wrexham (weighing-machine), £1 7s. 6d.; Halifax and District Chemists' Association, £1; J. G. B. Noble, London (box), £7 7s. 6d.; North London Pharmacists' Association (proceeds of which deliver and selection for the contribution of th Association (proceeds of whist-drive and sale of work by ladies' sewing guild at Pharmacy Club), £22 7s.; E. L. Paterson, Bristol, £1; Scarborough and North Riding Association of Pharmacists, £1 5s.; Mrs. J. W. White, Bristol, 10s.; Williams & Elvey, London (box), 17s. 10d.; and E. J. Wilson, Portishead, 9s. 6d.

Miss Buchanan called special attention to the contribution of the North London Pharmacists' Association. It was a sort of aftermath of the sale of work and exhibition held earlier in the year, and she expressed her gratitude to Mrs. Skinner and her friends for their work.

Rowsell congratulated the Committee on the thought they exercised in administering the Fund.

The report was adopted.

#### WAR AUXILIARY BENEVOLENT FUND

The following are the chief passages in a statement

drawn up by this Committee:

The Fund was inaugurated in August 1918, and was registered on September 12, 1918, under the provisions of Section 1 of the War Charities Aet, 1916, as a Charity "to supplement the Society's Benevolent Fund so as to enable special cases arising out of the war to be met, and to assist chemists, assistants, and their dependants needing help through the war, and who are not eligible by reason of statutory restrictions to be aided from the Benevolent

Fund."

The following is a full statement of revenue and expenditure up to and including July 1921: Contributions, £23,112 17s. 6d.; grants made, £5,875 19s. 6d.; interest, £1,842.9s. 8d.; balance, £19,079 7s. 8d. No administrative charges have been borne by the Fund, and the whole of the expenses involved in collection, book-keeping, stationery, printing, and the investigation of applications for assistance have fallen on the Pharmaceutical Society. The expenses would have been considerably larger than they actually were but for the whole-hearted voluntary cooperation of the officers and members of the various local pharmaceutical associations of the country, to whom sincere harmaceutical associations of the country, to whom sincere thanks are due.

The assistance given may be divided into three classes: (a) Dependants of those engaged in pharmaceutical practice who died as the result of the war; (b) pharmacists who had to close their businesses and take up naval or military had to close their businesses and take up haval or military duties, or whose position had been prejudiced by the war; (e) students whose pharmaceutical studies and financial resources were prejudicially affected by naval or military service. The following are typical examples of each class

of application:

Class A.—Widow and family of a chemist's assistant who died of wounds received in action, May 1915. There are three children—two boys and a girl—ages ranging from three children—two boys and a girl—ages ranging from seven to eleven. Mother supplements War Office allowance by doing such occasional work as her household duties will permit. The father intended the elder boy to become a qualified chemist, and his dying wish was that his son might be educated accordingly. The Comthat his son might be educated accordingly. The Committee, after investigation, arranged for admission of the boy to a secondary school, paying the fees and giving the mother a maintenance allowance in respect of his extras. It is expected that the young student will be able to take the School Leaving certificate of the London University next year. This is a case in which considerable further than the first of the fet boy, wishes grants from the Fund will be required if the father's wishes are to be carried into effect.

Class B.—A registered chemist and druggist formerly in Class B.—A registered chemist and druggist formerly in business in a good way on his own account. He was forced to close down and join the Army, realising as much as he could of his business assets. On demobilisation he found it impossible to obtain a suitable engagement in his profession, and after a considerable period of inquiry he resolved to attempt to re-establish himself in business on his own account. Having found a saidable creating he resolved to attempt to re-establish himself in business on his own account. Having found a suitable opening, he applied for assistance to supplement his capital sufficiently to enable him to buy the business. The Committee interviewed the applicant, and a visit was paid to the proposed business by a representative from the Society. The Committee in this case made a grant and supplemented it by a loan without interest, the recipient undertaking to make periodical repayments. The business has turned out well, and the pharmacist in question has been able to repay the first instalment of his lean promptly. instalment of his loan promptly.

first instalment of his loan promptly.

Class C.—The Committee has on two occasions defrayed the cost of railway fares of candidates travelling from the provinces to either London or Edinburgh for the examinations in July 1920 and July 1921. The local associations throughout the country have assisted the Committee in recommending the cases of those students whose necessities required the greating of such assistance. A registered required the graating of such assistance. A registered student was in the Army for three years, and was discharged with permanent anchylosis of the left knee. During the war he lost his father and brother, the latter killed in action, and was consequently deprived of the financial support they would observing have given. He obtained some port they would otherwise have given. He obtained some assistance from one of the war charities and entered a school of pharmacy for a nine months' course, but found his means inadequate to carry him through. His case was strongly supported by a member of the Society who knew him during apprenticeship, and the Committee made various grants which enabled him to secure qualification as a pharmacist and afterwards to take an advanced course of instruction,

The eases given are typical of the several hundred applica-tions which the Committee has dealt with, but it should be noted that instead of hundreds there would have been thousands of applications if the Ministry of Labour train-That scheme had not come into operation in October 1919. That scheme adequately dealt with the great majority of ex-Service students, who would otherwise have had to rely upon assistance from the Fund in order to resume their interrupted pharmaceutical studies. The grants that have interrupted pharmaceutical studies. The grants that have been made to Government trainees from the Fund have been in the nature of supplemental assistance where the main-tenance grant allowed was inadequate by reason of peculiar domestic circumstances. The total number of applications considered has been nearly 900.

Mr. Parry, in moving the adoption of the report, thanked the Council for the splendid manner in which it had supported the Committee in this very difficult The Committee tried to do their best to do the right thing, and they were perhaps more generous than just to every case considered. He pointed out that the cost of administering the Fund—considerably over £1,000—had been borne by the Society without being charged to the Fund. It would be an easy thing to spend the money were the Committee to decide to throw it away. But they felt they were the trustees of the chemists who had subscribed and the large subscribers outside who had assisted in raising the Fund. He would like to have given a fuller report, but was sure the chemists of the country would be quite satisfied without entering into details which might affect individuals if they were published.

Mr. Hines described the report as "colourless."

The President caused a smile by directing attention to

the fact that it was on pink paper.

Mr. Hines, continuing, insisted that the report was colourless in character, and would not go far to satisfy the critics of the Society. The Committee did not seem to have had sufficient pluck to suggest something in the way of a future policy in dealing with the Fund. He had never felt that the money had been spent as it should have been. That had been the feeling throughout the country, and criticism had been directed with the intention of extracting some statement regarding policy. As a subscriber, he did not feel at all satisfied with the way the money had been expended, and the Committee were leaving them in the dark as to what was to be done with the £19,000 still available.

Mr. White wished to counteract what Mr. Hines had said. He pointed out that the Government had provided said. He pointed out that the Government had provided funds to cover the same work that the Society had proposed to do. Thus the efforts of the Society had been overshadowed. They would have to spend the money, but why should they be in such a hurry to dispose of it? The time would come when they would spend it; but meanwhile he urged them to be careful. Had not they seen enough of the evil of doles?

The Treasurer (Mr. Bilson) said the Fund was being spent in a your desirable way. In certain cases, a man

spent in a very desirable way. In certain cases a man might make an apparently bona-fide request, and yet it might be found that it was simply a "try-on." Perhaps some such cases had occurred to Mr. Hines. With regard to the future of the Fund, he could not help thinking that after a year or two, when requests for grants might have ceased, the Society might seriously consider making the Fund into a permanent Orphan Fund. They had not a great amount invested for the Orphan Fund, and £14,000 or £15,000 would be a great acquisition to it. He quite realised that as the Fund was a war charity they would have to get permission to transfer the money, but he thought they might consider whether such a course would not be possible.

Mr. Antcliffe said that if Mr. Hines had come forward with some scheme it would have been better than making a rambling statement. He (the speaker) still thought the Society was giving money away too freely. In some of the cases it was doubtful whether the applicants should have the money at all. He wanted something practical, however, if Mr. Hines had anything to suggest.

Mr. Rowsell spoke in support of the Committee, pointing out that in three years they had spent a quarter of the money subscribed. How did they know what claims were likely to arise? He approved of the Committee granting everything necessary without throwing money away. They were relieving genuine cases and helping

necessitous people.

Mr. Melhuish paid a tribute to the large-heartedness and sympathy of the chairman of the Committee. When he himself was a member of the Committee the money was always dealt with in a generous way, and not a single case ever came up that was not fully investigated. They dealt with the Fund, too, from the point of view of business men. The money was raised at a time of great stress, and had not been required as much as had been anticipated. But it might be of incalculable value to the Society later on.

Mr. Skinner recalled that he was the mover of the

original resolution of the Council by which this Fund was started. The idea was to help young fellows coming out of the Forces whose career had been stopped. The Government, however, had stepped in and relieved the Society of a situation that even the Fund would not have been sufficient to meet. Of course, the policy of the Fund, when once it came into being, had been considerably extended. He himself had put up two or three cases, and, in two he was certain of, the Committee had dealt very generously; and he believed that whenever suitable cases came before them they would deal generously with them in future.

Mr. Keith agreed with Mr. Hines. He did not like

the Committee to say that certain cases did not come within the objects of the Fund. One case he brought forward was turned down for a technical reason. The man had not been in the business before the war, but he had served in the Army, and he (Mr. Keith) considered the rules of the Committee were not elastic enough.

The Vice-President contended that Mr. Hines erred on the one side and Mr. Antcliffe on the other. He did not agree that the Committee had not been generous, nor did he believe they had been too generous. He bore testimony to the thorough manner in which all the cases were investigated.

Mr. Hines, replying to the discussion, said that he would like to see the Committee enlarged, so that every member of the local associations might become an ex-officio member. There might be a very hard time of unemployment, during which the Fund might be used on

recommendations from the local organisations.

The President intimated that the Council had decided on the previous evening to send the report to local associations. He thought the report was quite sufficiently full in view of the fact that the Committee's work in connection with such a fund must of necessity be done, to a large extent, in secret. It could not be done publicly, because of the interests of the people who received help. The work of the Fund was by no means finished yet, and they had a good way to go before the objects for which it was raised would have been met. He agreed that it would be very unwise to dispose of the Fund for many years to come. The case Mr. Keith had mentioned did not secure support, but he did not think any member of the Council was entitled to say that it was not considered, for it had had very elaborate consideration. He had heard expressions of opinion in all parts of the country showing that pharmacists believed that the Committee had been generous in dealing with cases which were within local knowledge.

Mr. Parry said he would not deal with the little bit of criticism which had been raised by Mr. Hines, because there was nothing in it. If Mr. Hines had any suggestions to make the Committee were not only willing to utilise them, but asked for them. In one case referred to the grant was not made direct. The Committee were suspicious and left the money in his (the speaker's) charge (as often happened), so that he could investigate the case before handing over the grant to the candidate. The work of the Fund, he believed, had only commenced, for the previous day they had had applications of a new type, and grants were made amounting to something like £250.

In course of time some means of extending the scope of the Fund would have to be found, but beyond that statement he could not go at present. The main business of the Committee was to conserve the Fund for pharmacy, and to see that it was not taken from them.

#### ESTABLISHMENT COMMITTEE

The report of this Committee, which was of a routine character, was adopted without comment. This was all the public business.

#### Private Meeting

The following report of the private meeting on the previous day (December 6) was handed to the Press:

The Council considered a report from the War Auxiliary Benevolent Fund Committee on the work of the Fund. The report was received and ordered to be sent to the associations, and an epitome to be published in "The Pharmaceutical Journal." The secretary was also directed to furnish a copy of the report to any subscriber to the Fund who might desire to have it.

# North British Branch

THE opening evening meeting of the session was held at 36 York Place, Edinburgh, on November 30. Mr. G. Shiach Kitchin (chairman of the Executive) occupied the chair. The chairman referred to the deaths of Mr. Alexander Noble, Ph.C., senior partner of Duncan, Flockhart & Co., Mr. William Giles, and Mr. Adam Duncan, and he suggested making a record in the minutes of their sense of loss and their appreciation of the work done by these deceased members. Dr. W. G. Smith, head of the Botanical Department of the East of Scotland College of Agriculture, President of the Botanical Society of Edinburgh, and a member of the Scottish Board of Examiners, gave an address on

#### BOTANY IN THE TWENTIETH CENTURY.

Dr. Smith first briefly reviewed the subject, connecting the old work in botany with the new. the older generation, busy with the larger affairs of life, may not have realised why the newer text-book—e.g. Professor Small's—is so different in several ways from their former pabulum. The younger generation may think that botany is something hard and fast, an antiquated, fossilised science laid down in past ages and maintained in the syllabus for their torment. Botany is the one subject that deals with life, which comprises energy, growth, reproduction, and evolution, not merely of one plant specimen, but of all animals, each individual man and man's communities, and of nations. Botany and pharmacy and agriculture are deep-rooted growths. At one time the witch or herbalist collected plants, cooked them with curious incantations, and gave them to sick folks. Nowadays the chemist takes the plant, and, after many processes, he supplies crystals of pure drugs. How these substances were prepared by plants is an old problem, which until about fifty years ago baffled both botanist and chemist. The beginnings were made in the seventeenth century. Van Helmont planted a willow (5 lb.) in 200 lb. soil; five years later the tree weighed 169 lb., though the soil had only lost 2 oz.; therefore the gain in weight did not all come from the soil. Boyle's recognitive transparence of the soil of the soi tion of tarry substances in cucumber plants was a recognition of carbon without knowing its source. Hooker's development of the compound microscope revealed the structure but not the composition of plants. Priestley's discoveries in the later eighteenth century were important. Liebig, about 1840, upset the prevailing notion that plants obtained their organic matter from the soil. What the plant needed, according to Liebig, was to be found out by analysing the plant ash and comparing it with a soil analysis. Thus the mineral theory of plant nutrition came into prominence. A result of this chemical period was a worship of the chemical analysis and a serious neglect of the living plant. There is still a residue of this sentiment. The great development has been experimental work, mainly in plant physiology. The publication of Sachs's Lectures in 1865 brought order out of chaos. This was recognised by Huxley, more so by Vines, and his text-book ("Physiology of Plants," 1886) first revealed to English readers this important new

domain of botany.

Another great development of the past fifty years is the recognition that not only is there life in the plant, but there is life in the soil. About 1870 Pasteur suggested that the formation of nitrates and ammonia from farmyard manure was due to bacterial action. In 1870 Schloesing and Muntz made a valuable observation. Experimenting with sewage-beds, they noticed that the sandbed had no action till it became infected with bacteria which broke down the complex carbon and nitrogen compounds. We have to recognise that the soil contains innumerable minute organisms (bacteria, etc.), all actively changing the soil. Russell, in 1921, says:

It is a mistake to suppose that the medium in which the soil organisms live and which is in contact with plant roots is the inert mineral matter which forms the bulk of the soil. The leal medium is the colloidal complex of organic and inorganic compounds, usually more or less saturated with water, that envelopes the particles.

This led the speaker to consider colloids, which, he and retaining other substances; hence excess of colloid, as in a peaty soil, leads to a poor crop—e.g., heather. This recognition of the utility of soil micro-organisms was considerably assisted by the experimental work on the root-nodules of *Leguminosæ*, the pioneers being Helbriegel and Willfarth (1885). Nitrification in the soil was first suggested by Warington at Rothamsted in 1899, and elaborated by him up till 1891. Since then his views have been confirmed. Later came the discovery of mycorhiza (fungus roots) in trees by Muffer in Denmark from 1878 on. This has been extended, so that now many plants are known that obtain their food supplies, at least partly, with the assistance of fungi in the soil. Still later, Rayner's work on heather (1911-21) proved that ling, the plant of poor soils, owes its wide distribution to the symbiosis of a fungus which permeates the whole plant and is carried to new places along with the seed. The speaker then explained how the plant, apart from symbiotic organisms, bears a relation to the soil that cannot be expressed in terms of nitrogen, phosphorus, and potash. These studies have directed increased attention to the plant-cell, the centre of all living activity. Dr. Smith traced the study of the cell from the seventeenth century up to date, and described in great detail the power contained in each minute cell. He gave illustrations of the application of internal pressure, and, proceeding, said: The plant-cell contains great reserves, active or potential. In the cytoplasm, glycogen, fatty bodies, etc.; in the plastids, starch; in the vacuoles, sugars, glucosides, colouring substances, etc. Here for ages have been manufactured substances which have defied man's construction, except a few cases where synthesis has succeeded—e.g., tartaric acid (1860), indigotine (1880), vanillin (1882), theobromine (1895), cocaine and atropine (1903), nicotine (1904)—a list incomplete, but still far short of the plant, which is still the cheaper producer—e.g., rubber. Recent years have seen great activity in plant-breeding. The older work of Vilmorin, Garbon, and others was private enterprise, but Denmark became the leader in state organisation about 1870. The example set by Denmark was followed by other countries. Two chief methods are used in plant-breeding-selection, or the search for new varieties as variations or mutations from existing races; hybridisation, to combine the characters of parents, followed by the selection of the more useful progeny. Neither of these methods is new, as Dr. Smith pointed out in indicating the particular investigators who had increased the knowledge on the subject point by point. It was after Mendel's work was known that the subject began to assume new interest. The speaker then pro-ceeded to plant pathology, discussing the various methods of combating disease by means of fungicides and the possibilities and achievements in regard to plant immunity. In most sciences, he said, there is a gap

from 1914 to 1919. But the war intensified investigation in things that mattered for war. The importance of nitrogen for explosives made it essential to get nitrogen or lose the war. Agriculture should benefit from the huge manufacturing plants erected, and nitrate of lime or other compounds will be used in the future. Another instance is the utilisation of the common nettle. In 1901 an Austrian firm patented a manufacturing process, and in 1916 the Central Powers used nettle fibre to make wagon-covers, tents, and even military clothing. In 1918 Germany had 10,000 acres under nettle cultivation, also in Hungary it was grown as a crop. Recently a process has been patented (Journal, Ministry of Agriculture, August 1921) whereby straw, treated with calcium carbonate and sulphate of ammonia, is acted on by micro-organisms to produce farmyard manure without the aid of cattle or stock. Another utilisation of war material has been tested by employing "gas" apparatus to distribute carbonic acid gas over growing crops, which, it is claimed, become much more productive after treatment. At the present moment we are in the midst of great activity in research and publication, mainly by the younger men. The newer branches of botany are being rapidly developed, but the old botany was not useless. The training in taxonomy or systematic botany, ill-liked by the student, has raised men able to take part in plant-breeding. Plant physiology, with its test-tubes and laboratory apparatus, has given us a better idea of how to grow successful crops. Mycology, or the study of fungi, has saved millions of pounds of crops that might have been destroyed. Botany, combined with chemistry, promises to give us a fuller knowledge of plant products as food and drugs. Biochemistry and its fuller study of man and his life has many applications. One is the evolution of hygiene, or how to keep healthy by living in agreement with one's surroundings. But when that is a working scheme the Pharmaceutical Society will come to an end, for there will be n

will be no need for drugs to heal the sick.

On the motion of Mr. Thomas Stephenson, Ph.C., seconded by Dr. George Coull, Ph.C., a vote of thanks was awarded to Dr. Smith. A letter was read from Mr. A. J. Dey, managing director of T. & H. Smith, Ltd., handing over to the Society, on behalf of the company, a portrait in oils by Mr. Hugh Munro, artist, of Mr. Thomas Smith, Ph.C., L.R.C.S.E., the founder of the business. Mr. Thomas Smith was one of the, original members of the Pharmaceutical Society. He was a pioneer in pharmaceutical research, and up to the very end a keen student and research worker, having in his own house a private laboratory, where he continued his pharmaceutical investigations. The chairman, in accepting the gift on behalf of the Society, said it was a valuable addition to their collection, completing as it did the series of the founders of old Edinburgh pharmaceutical businesses now widely known, and he suggested they should instruct a letter of thanks to be sent to Mr. Dey, whose unavoidable absence they regretted. Attention was directed to a fine specimen of Grindelia robusta grown at Inverleith, which was from Mr. R. Glode Guyer, Ph.C.; to an ancient wooden pestle made of the heartwood of Guaiacum officinale from Dr. G. Balfour

Marshall; and to books added to the library.

VISIT TO WORKS.—A visit was paid by the members of the Blackburn Technical College Chemical Society, on December 3, to the works and laboratories, which cover an area of ten acres, of William Blythe & Co., Ltd., chemical manufacturers, Church, Accrington.

FRENCH IMPORT OF GERMAN POTASH.—Considerable concern has been created in French potash circles by the news that large quantities of German potash had been imported into France at a low price. Fourteen or fifteen trainloads are reported to have passed through Mulhouse, Kehl, and Strasburg on the way to Paris, and six boats full of potash salts have arrived at Douai. In spite of duties of 30 fr. per ton on chloride of potassium, the German salts work out cheaper than the French. The matter has been reported to the Government.

# Corner for Students

Conducted by Leonard Dobbin, Ph.D.

Communications should be addressed "Corner for Students, 'The Chemist and Druggist,' 42 Cannon Street, London, E.C. 4,"

# Report on the November Analytical Exercise

THE powder distributed to students on November 8 contained two parts by weight of potassium aluminium sulphate (potassium alum), seven parts of zinc sulphate, and one part of magnesium sulphate. The calculated composition of such a mixture is:

Al		 	 		1.1
Zn	•••	 	 		15.9
Mg K		 	 		1.0
	• • • •	 	 		1.6
$SO_{A}$		 	 		35.4
$_{\rm H_2O}^{\rm SO}$		 	 		45.0
_				_	
					100.0

The powder also contained, as impurities, a distinct trace of manganese, and faint traces of iron and of a chloride. Samples of the powder were distributed to seventy-eight students, and sixty-three reports were submitted for examination. The sulphuric acid radical was detected in every case. The failures in the detection of the metallic radicals were: Aluminium, 16; zinc, 1; magnesium, 29; potassium, 24. The trace of manganese was missed in forty-one cases, and five students failed to report the evolution of water when the powder was heated in a

With the exception of the zinc, the metallic radicals were present in the powder in small proportion only, and were present in the powder in small proportion only, and this constituted almost the only troublesome feature of an exercise which was free from any special analytical difficulty. Careful manipulation and close attention were essentials of success in detecting the aluminium, magnesium, and potassium, and the numerous failures regarding these metals reflect the fact that the essentials were not always suitably observed. The failure of 25 per were not always suitably observed. The failure of 25 per cent. of our correspondents to recognise the precipita-tion of aluminium as hydroxide in Group III. is evidence that due care was not exercised at this stage, for, although small in quantity, the precipitate should not, with correct procedure and attentive observation, have been entirely missed. Many of those who did observe the precipitate omitted to test it or the subsequent precipitate of zinc sulphide (also the original powder) for manganese, and thus they failed to detect

this metal as an impurity.

The magnesium could be detected without difficulty when appropriately sought for, but there was serious risk of its being missed altogether unless the filtrate from the zinc sulphide (after testing it for the barium group by means of ammonium carbonate) was evaporated to dryness, the dry residue ignited to destroy ammonium salts, and the small amount of solid matter then remaining heated with a few drops of dilute hydrochloric acid, and the resulting solution passed through a very small filter paper. When a portion of this solution was made slightly alkaline with ammonia, and ammonium phosphate was added, a precipitate of ammonium magnesium phosphate was formed either at once or on standing for a short time in the cold. The most necessary feature in the testing consisted in concentrating the magnesium into the smallest convenient quantity of solution prior to adding the phosphate.

The trace of manganese was easily detected by the sodium carbonate and nitre bead test, or by Crum's test, applied to the original powder or to the iron-group precipitate. Several students recognised traces of manganese also accompanying the precipitated zinc sulphide. The numerous correspondents who described the irongroup precipitate as entirely soluble in solution of sodium hydroxide overlooked a slight brownish residue which contained manganese.

A group of students, all of whom wrote from the same neighbourhood, described the heating of the powder on charcoal with the blowpipe as yielding "hard, white beads"—presumably metallic beads, although this was not explicitly stated—and indicating that these suggested There seems to be a serious misconception here, since zinc, at the temperature of its reduction on charcoal, is a volatile metal and would pass off as vapour instead of yielding metallic beads. It is the burning of this vapour which gives rise to the characteristic incrustation on the charcoal due to zinc oxide.

In a few cases the charcoal and silver-coin test was incorrectly adduced in confirmation of the presence of a sulphate. A positive result from this test merely indicates sulphur, which may have been present either un-combined or in any form of combination.

An apparent error in procedure is indicated in several reports, where the treatment requisite for the re-oxida-tion of iron after the passing of hydrogen sulphide is described in some such terms as: "Boiled off hydrogen sulphide, added nitric acid, ammonium chloride, and ammonia, and boiled." Possibly this is nothing more than a slovenly way of describing what was done, but if not, and the procedure adopted was actually that described, then failure to attain the end in view was quite likely to result. The nitric acid is the oxidising agent, and the second boiling should immediately follow its addition. The ammonium chloride and the ammonia in excess are added after the oxidation has been effected.

The evolution of carbon dioxide in the preliminary testing, as reported by one or two students, must be attri-

buted to faulty observation.

#### PRIZES

The first prize for the best analysis has been awarded to: T. C. Robinson, 14 St. James's Road, Church, Lancs.

The second prize has been awarded to:

ERIC PARKER, 41 Gordon Street, Colne, Lancs.

First Prize.—Any scientific book that is published at a price not greatly exceeding fifteen shillings may be taken

Second Prize.—Any scientific book which is sold for about seven shillings and sixpence may be taken as a

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

Marks Awarded for Analyses 1. Correspondents who are unqualified:

" т.	COL	respon	uente	wite	ure	unqualifica.		
Т.	C.	Robin	ison	(first	1	Rhatany		 74
	rize)				98	Câon		 73
Eri	c Î	Parker	(s	econd		Krypton		 73
p	rize)				96	Medica		 73
Sco	polar	ninc			94	Aza		 72
Cal	ifigs				93	Marcus		 72
Vic	ia				93	Ptah		 72
Κ.	Τ.				91	Cyrus		 70
Nic	ckel				91	Sinapis		 70
	sidera	$_{ m atum}$			90	Cedar		 69
	ıus				90	Squib		 68
Alt	ior				89	Hic labor		 67
	seas				88	Uranos		 66
Æ	scula	pius			87	Aspiring Che	mist	 65
Cag	glio				86	Kino		 65
Alp	habe	i a			85	Corsley		 64
L.	Η.				85	Semper idem		 64
Des	smid				83	Wolfsbane		 64
Jas	on				82	Hugh Woods		 62
Sin	igrin				82	Clarissa		 61
Wh	ite p	pt.			03	Ormonde		 58
Par	ısy				79	Beginner		 56
Ser	ecio	jacob:	æ		79	Palladur		 55
	rium				79	R. N. V. R.		 55
	cero	ł			78	Early Riser		 54
Ku					78	Omega		 54
Pyl	on				78	Bruce		 53
	to	÷			77	Diazo		51
Ma					75	Knowledge		 47
Но	ward				75	A. J. C.	• • •	 45
Per	rge				74	l		
	-							

2. Correspondents who are qualified or who have not

indicated that they are unqualified:

Hopeful ... ... 68 | Pinene ...

Mel Boracis ... ... 78 | Prima Facio

# To Correspondents

Califics.—Owing to its volatility zinc is not obtained in the form of metallic beads when zinc compounds are heated in the reducing flame on charcoal. See the general remarks.

NICKEL.—The conspicuous evolution of water when the powder was heated in a dry tube should not have been

PINUS.—The original aqueous solution of the powder was not a suitable solution in which to test either for potassium by means of tartaric acid or (after the separation of the aluminium by adding ammonium chloride and excess of ammonium hydroxide) for magnesium by means of sodium phosphate. The precipitate obtained in the first case was liable to consist partly of other insoluble tartrates besides potassium hydrogen tartrate, while that in the second case was liable to contain zinc, unless ammonium chloride had been added in large excess. Short cuts to confirmatory results must be taken with much circumspection.

ALTIOR.—When you added lead acetate in testing for a chromate (if you actually did add it, which seems doubtful) you should have obtained a white precipitate of lead sulphate, whereas you report "No precipitate."

Seeseas.—By simply assuming, without examining them, that the precipitates produced by ammonium chloride and ammonia and by ammonium hydrosulphide consisted of aluminium hydroxide and of zinc sulphide respectively, you probably lost two opportunities of detecting the trace Testing for a phosphate should not have of manganese. been omitted.

ÆSCULAPIUS.—Note that shaking in the cold and standing for some time are more appropriate than warming for obtaining a precipitate of ammonium magnesium phos-

Caglio.—Slight darkening did occur when the powder was heated for some time with concentrated sulphuric acid, but this only very faintly resembled the behaviour of a citrate. The supposed precipitate of calcium citrate of a citrate. The supposed prec-consisted of calcium sulphate.

L. H.-Devote more time and attention to preliminary tests and special tests. The care bestowed upon preliminary tests is usually well repaid. You omitted the

tests for ammonium compounds and for nitrates.

Desmid.—The heavy white fumes evolved when the powder was heated with sulphuric acid were due to the

volatilisation of this acid.

Sinigrin.—Your remark that the powder was "soluble in cold dilute water" is puzzling.

Mair.—The correct procedure in applying Carnot's test for potassium is first to mix one drop each of the sodium-thiosulphate and the bismuth-nitrate solutions in a test tube and then to add 5-10 c.c. alcohol, when the liquid must remain free from any trace of turbidity. (The formation of a white precipitate at this stage is almost certain to be due to the bismuth-nitrate solution being too concentrated.) A single drop of the solution to be tested, which should be as concentrated as possible, is then added, when, either at once or on standing, a

yellow precipitate, indicating potassium, may appear.

Howard and Corsley.—The calcium you detected
must have been introduced from filter papers, impure

reagents, or tap water.

RHATANY.—Your preliminary examination was very incomplete, and your report on the systematic analysis was much too sketchy. Details of the treatment of the

group precipitates should have been given.

Caon.—You tested for chromium as chromate by means of barium chloride in a solution which, had chromium been present, could only have contained it as chromic chloride. You should endeavour to master the chemistry of the processes you employ. See the last sentence of the reply to "Caglio." Krypton.—There are some curious slips in your test-ing for acidic radicals. You prepared a solution by boil-

ing the powder with sodium carbonate, and then pro-

ceeded to test this solution for a carbonate-saving your reputation as an analyst by detecting it. To another portion of the solution you added hydrochloric acid to neutralise, and then added silver nitrate, but you report No precipitate.

MEDICA.—The use of magnesium sulphate and of mercuric chloride as supposed tests for bicarbonate and carbonate seems to be ineradicable, but your experience ought to convince you, at least, of their unsuitability for the purpose, seeing that you boiled the powder with sodium carbonate in large excess, and filtered, and then, on testing the filtrate by means of these reagents, failed to obtain indication of the presence of the added carbonate.

Aza.—It was wasteful to discard the portion of the original solution which had failed to give any precipitate in Groups I. and II. and to take a fresh portion for the succeeding groups. If you added ammonium chloride in sufficient excess, the precipitate obtained on adding ammenium hydroxide contained neither zinc nor magnesium, but it contained the aluminium which you failed to detect.

HIC LABOR and URANOS .- As the aqueous solution of the powder already contained magnesium sulphate and did not yield any precipitate when simply boiled, the addition of more, followed by boiling, would not produce

SEMPER IDEM.—The nitrate which you detected must have been an introduced impurity.

Beginner.—Do not omit to give a summary of the con-

stituents detected in each analysis.

PALLADUR.—Your generalisation that "as the powder was white, no coloration would be obtained . . with a borax bead" is too sweeping. Manganous oxalate. cuprous chloride, and anhydrous ferric sulphate at once suggest themselves as examples of colourless substances which would yield coloured borax beads.

EARLY RISER, OMEGA, and BRUCE.—It is difficult to understand how you obtained from the powder an aromatic odour which suggested a benzoate. Perhaps the S.V.R. provided the odour which passed for aromatic.

DIAZO.—The precipitate which you mistook for calcium oxalate was really calcium sulphate, and you have been mistaken in interpreting the results of your tests for an acetate.

Knowledge and A. J. C.—You are strongly recommended to prepare a mixture in imitation of the powder and to examine its behaviour in light of its known composition.

MEL BORACIS.—Kindly append your name to your next report if you desire to be regarded as a tournament com-

petitor.

PRIMA FACIE.—See the first sentence of the reply to "Aza.

December Analytical Exercise

A MIXTURE of not more than three salts will form the subject of the next exercise in qualitative analysis. mixture will comprise acids and inorganic bases occurring in the British Pharmacopæia, and is to be submitted to a thorough systematic examination, all its constituents arc to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a stamped and addressed envelope, not a stamp merely) will be received up to Tuesday, December 13, on which day the samples will be posted. Students' reports will be received up to Saturday, December 24. Each report should contain a concise account of the work done, and should include a list of the constitucnts detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

The analysis announced above forms the second exercise in the analytical tournament for the current winter session. The usual monthly first and second prizes in this series of analyses will be awarded only to apprentices or assistants who are preparing for the Qualifying examination of the Pharmaceutical Society of Great Britain or of Ireland, which fact must be attested on their

reports.

# Births

STOREY.—At Dufferin Villas, Ballyholme, Bangor, on November 27, the wife of Mr. Fred Storey, President of the Chemists' and Druggists' Society of Ireland, of a daughter.

TINDALE.—At Whitby, on December 4, the wife of Charles Tindale, M.P.S., of a son.

# Marriages

REID—Masson.—At the Royal Hotel, Inverness, on December 2, by the Rev. Donald Macleod, B.D., M.C., William George Reid, chemist, Tain and Wick, to Amy Grant Masson, Wick.

WOOD—WHITTAKER.—At Edenfield Parish Church, on December 6, Mr. Tom Wood, chemist and druggist, son of Councillor J. H. Wood, Ramsbottom, to Florence, daughter of Councillor R. Whittaker, Edenfield.

# Deaths

ARMISTEAD.—At Castle Villa, Kendal, on November 24, Mr. Hugh Baldwin Armistead, retired chemist and druggist. Mr. Armistead, who qualified in 1876, was in business at Dalton-in-Furness for twenty-five years; on his retirement the pharmacy was acquired by Mr. A. G. Grigg.

BOYERS.—At his residence, Wine Street, Sligo, on December 5, Mr. Cecil Francis Boyers, Ph.C., aged twenty-five. Mr. Boyers qualified in 1919, and had since Sligo, on been in business in Sligo.

COOK.—At Broomhill Lodge, Woodford Green, on December 1, after a short illness, Mr. Edward Harvey Cook, eldest son of the late Mr. Edward Rider Cook (Edward Cook & Co., Ltd., Bow, London, E. 3), aged sixty.

Foggan.—The funeral of the late Mr. George Foggan, chemist and druggist, Bedlington, whose death was announced in our last week's issue (p. 53), took place at Bedlington Parish Church on November 30. A large concourse of people lined the streets through which the procession, headed by Freemasons, passed. At the service, which was choral, the Northumberland County Pharmacists' Association was represented by Messrs. George Cormack (President), Charles E. Layne (honorary solicitor and assistant-secretary), G. R. Patterson (secretary), H. H. Denton, A. Pick, and E. Watson; and the Newcastle-on-Tyne Association by Messrs. J. F. Simpson, W. Pescod, F. Gilderdale, and others. Patterson sends the following tribute: Mr. G. R.

Our old and trusted friend, Mr. George Foggan, has gone, and his house, his village, his county, and his profession are the poorer. In the meetings of the County Pharmaceutical and Executive Committees he had always taken a most active interest, and his counsel was always esteemed by his colleagues. He had one of the largest Insurance practices in the county, and could advise with knowledge on all matters pertaining to Insurance dispensing. Mr. George Foggan, active to the last, died in harness. We shall carry with us always the recollection of his kindly urbanity, his sterling loyalty, and warm hospitality.

KEND — At Dunmohr, Dalkeith, on November 30. Mr.

Kemp.—At Dunmohr, Dalkeith, on November 30, Mr. William Kemp, chemist and druggist, 33 High Street. Mr. Kemp, who qualified in 1891, had been in business in Dalkeith for many years. He leaves a widow.

STAMP.—At 14 Harrington Court, London, S.W. 7, on December 3, of pneumonia, Alice, widow of the late Mr. Edward Blanshard Stamp, Ph.C., High Street, Hampstead, N.W. 3, aged seventy-four.

WALLACE.—At 19 Ardmillan Terrace, Edinburgh, on November 23, Mr. William Wallace, for thirty-eight years with T. & H. Smith, Ltd., manufacturing chemists, Edinburgh, London, and Glasgow.

WILLIAMS.—At Burnt Oak, Edgware, on November 23, Mr. Hugh Williams, chemist and druggist, aged ninetyfour,

# Personalities

CAPTAIN E. C. BENNISON, B.Sc., Ph.C., Quartermaster, 1st Southern General Hospital, Birmingham, has been re-gazetted, with the rank of Captain R.A.M.C.T.R., to date from November 24. Captain Bennison has had ten years' commissioned service with the R.A.M.C.T.F.

Mr. L. B. Sutcliffe, Ph.C., the newly elected President of the Bradford Pharmacists' Association, is a native

of Goole, in which town he also served his apprenticeship, gaining further experience in Bath, Cambridge, and London. He passed the Major examination in 1897, and two years later started in business on his own account at 16 Carlisle Road, Manningham, which establishment he has successfully developed. Mr. Sutcliffe has been a member of the Bradford Association since he opened in the city. and has served on its council for six years; beyond this he takes no active part in public affairs. His hobbies are golf and motor-cycling.



MR. L. B. SUTCLIFFE, PH.C.

Mr. Edward Salthouse, works manager for Parke's Drug Stores, Ltd., at their headquarters, Harmood Street, London, N.W. 1,

has been invited to join the directorate of the company. A Lancashire man, Mr. Salthouse served his apprenticeship at Blackpool, subsequently coming to London. He qualified in July 1896, and was for a long time associated with Mr. Herbert Skinner, Ph.C., the Royal Northern Hospital, N.7. He then studied electrical engineering, and directed the laying of several tram-way cables in England and in New Zealand. Having to return to this country owing



MR. E. SALTHOUSE.

to domestic illness, he took up his old profession, and after some years' experience in managing a retail shop for Messrs. Parke, he was asked to undertake the duties of works manager, which he has carried on for the last five years. His mechanical knowledge and experience in the direction of men have been of great assistance in develop-ing the manufacturing side of the business, which has benefited also by his skill and ingenuity in devising new and taking lines. He is one of those men who live for their work.

WE are indebted to Mr. W. H. Saunders, chairman of Ayrton, Saunders & Co., Ltd., Hanover Street, Liverpool, for the following reminiscences of the late Mr. Francis Longmore, Melbourne, whose death was announced in our last week's issue (p. 53):

I should like to say that the late Mr. Francis Longmore was no stranger to English chemists, being my guest in 1914 at the time he attended the British Pharmaceutical Conference at Chester. He was delighted with the hospitable, friendly leception extended to him on that occasion; it was his first visit to England, and the first time he had had an opportunity of meeting English pharmacists; and he carried back with him to Australia very happy and kindly memories of his brothren in the craft. He frequently referred to this when I was his guest in McIbourne in 1919. Mr. Longmore was a wonderful man, highly respected and Mr. Longmore was a wonderful man, highly respected and esteemed by all his contrères, not only in Melbourne but throughout Victoria. He took a deep interest in all pharmaceutical affairs, and his long experience in the trade, well-stored mind, and happy personality were much appreciated. He was wonderfully active and energetic, being at his pharmacy at 8 o'clock every morning, calling in his motor-car at the Post Office as he went for his mail-bag.

# Trade Notes

FINANCIAL HELP is offered to businesses which require backing and developing in the advertisement of C. Vernon

English-made clinicals are quoted in the advertisement of Mr. O. C. Goldsmith, 182 Ribblesdale Road, Streatham, London, S.W. 16.

ALLENBURYS' No. 3 MALTED FOOD .- A reduction in price of this food is announced in the advertisement in this issue of Allen & Hanburys, Ltd.

EEL-ME TABLETS for chapped hands, etc. The package is illustrated in the advertisement of Zamo Manufacturing Co., Newington Green, London, N. 16.

JAPANESE DANCE COMPO.—Breeze's, Ltd., Plymouth, call attention to the Royal Gold Medal Japanese Dance Compo., which is much in request for sprinkling on dance-room

COLTON MACHINERY.—John J. Griffin & Sons, Ltd., Kemble Street, Kingsway, London, W.C. 2, announce a reduction in the prices of Colton pharmaceutical machinery, for which they are sole British agents.

SUPEX CHOCOLATE, of which a sample reaches us from Supex, Ltd., 22 Cork Street, London, W. 1, is a nicely flavoured product with a smooth taste, which makes it very acceptable for eating purposes. It is neatly packed and labelled in English and Russian.

PRO-PHY-LAC-TIC TOOTH-BRUSH .-- This brush, which is made by the Florence Manufacturing Co., Mass., U.S.A., is sold in this country by William E. Pack & Co., 31 Bartholomew Close, London, E.C. 1, who offer to send a booklet, "Tooth Truths," to any chemist who applies.

GLAXO SERVICE BULLETIN.—In addition to the usual features, the Glaxo house-organ contains, in the current issue, an article on "Real Service" by Mr. Hugo Wolff, who offers to put pharmacists "in touch with firms willing to divide their 'cake' with the retailer." An index for the first sixteen issues of the "Bulletin" is given.

Maltoline is a new form of malt and cod-liver oil, brought out by the Maltine Manufacturing Co., Ltd., 9 Holborn Viaduct, London, E.C. 1. It is in powder form, and retails at 3s. (protected). A list of Christmas numbers of various magazines which carry Maltoline advertisements is given in the announcement in this issue.

"KELLY'S DIRECTORY OF THE CHEMICAL INDUSTRIES, 1921," which has just been published (pp. xxxi + 353, 30s.: Kelly's Directories, Ltd., 186 Strand, London, W.C. 2), follows closely the plan of the 1919 issue. A glance at the present edition (the fifteenth) reveals the fact that the previous volume of the kind is rapidly becoming out of date on account of the number of business changes that have occurred since it was completed. Printed, we are glad to notice, on better paper than its predecessor, the directory comprises the customary well-arranged lists of wholesale and retail chemists, druggists' sundriesmen, veterinary surgeons, surgical-instrument manufacturers, photographic-material dealers, and, in addition a fourteen reguliat of proprietations. addition, a fourteen-page list of proprietaries, with their makers' names and addresses. The misprints that we have been able to find are so trifling as to be hardly worth mention; and it is not too much to say that the volume is invaluable to traders who do any business outside their own immediate localities.

THE LONDON HOME OF DE LUZY.—The removal of the London offices of De Luzy, the Paris perfumery house. from Ludgate Hill to 3 London Wall Avenue, E.C. 2, synchronises with developments in policy concerning which a C. & D. representative learned something the other day in the course of a chat with Mr. W. H. Calnan, their well-known general manager for Great Britain. Briefly, the De Luzy policy brings the retailer a bonus of 8 per cent. extra profit in goods, in addition to  $33\frac{1}{3}$  per cent. discount on superlatively finished lines that are advertised in almost every medium of any value and are protected. New "outers," to harmonise in style with the containers of the goods themselves, are a recent addition to the salesman's

aids; and free samples, showcards in different sizes and styles, and screens for window-dressing effects are also available. A distinctive innovation is a counter "testing stand," consisting of a row of stoppered vials fixed in an ingenious way so that the sampling customer may not, in a fit of abstraction, take a vial home. It is interesting to learn that there is a definite movement in Paris in favour of simplicity in the finish of perfumes, and that the newest



type (one of which is illustrated here) eschews the vanity of gilded satin cushions and so forth, reposing in a relatively plain box wrapped in dust-proof paper. At the same time, nothing common or mean defaces a De Luzy product: each bottle is hand-lathed and hand-stoppered which, incidentally, means that the retailer will not be worried with leakages. The output of the De Luzy factory is 40,000 units a day, and an ample stock is held in the capacious and ingeniously planned London warehouse.

# Trade-marks Applied for

The figures in parentheses refer to the classes in which the marks are grouped, for a list of which, with particulars as to registration, see "The Chemist and Druggist Diary" 1921, p. 300.

(From "The Trade-marks Journal," November 9, 1921.) "Hem-rid" on circle; for a liniment (3). By J. F. Brown, D. S. Anderson, and J. Fulton, 137 West Campbell Street, Glasgow. 418,191.
"Aniska"; for medicinal lotions (3). By A. Rand, 219 South Lambeth Road, Clapham, London, S.W. 8.

219 South Lambeth Road, Clapham, London, S. W. 6. 418,502.

"Pone"; for a medicine (3). By W. R. Morgan, 91 High Street, Rhymney, Mon. 418,749.

"Zonquah"; for a medicine (3). By R. R. Bagshaw, 710 Oldham Road, Newton Heath, Manchester. 418,751.

"Sodazone"; for food substances (42) and for mineral waters, etc. (44). By Sodazone, Ltd., 163 Spring Hill, Birmingham. 415.707/708. (Associated.)

"Paral"; for food substances (42). By Lever Bros., Ltd., Port Sunlight, Cheshire. 416,705.

"OR-LEM"; for beverages (42). By R. J. Stranger, 84 Millbrook Road, Southampton. 418,661. (Associated.)

"GLYMOL"; for food substances (42). By De Bruyn, Ltd., Central Buildings, Blackfriars, London, E.C. 4. 418.674.

# Information Department INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated. M/212. Gouret Frères' soaps | T/2911. "Half Moon" soda M/212. Gouret Frères' soaps E/3011. Armstrong's influenza

# INFORMATION SUPPLIED

Inquiries regarding the following articles have been answered. The information as to supply will be given to others who send a stamped, addressed envelope to the Information Department, THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C. 4.

Casagel, S/712
Dr. Hooper's pills, B/612
Evatmine, G/612
Gilt transfers for bottles, N/512
"Haline" antiseptic, W/712
Hycol, L/212
"Ideal" bottles, H/312
"Invincible" soaps, H/312

Lenitol, R/712 Luckstone preparations, T/2911 Lukens' catgut, B/212 Mason-Pearson's hair-brush

"Scarlet Pimpernel" perfumes
K/712
Solvellæ tablets, B/612

# Observations and Reflections

By Xrayser I.

#### Anniversaries

are not of much importance in themselves; but they serve to mark time, and afford opportunities for reviewing the course of events in perspective. As one grows old they seem to recur with ever-increasing rapidity, and the accidental discovery that my notes for this week would appear almost to a day on the twelfth anniversary of my first contribution to this page gave me something of a shock. In the time that has elapsed since then, brief as it appears, what changes have taken place! The whole complexion of the world seems indeed to have changed, and in our smaller pharmaceutical world changes have occurred that may prove as important as any since the Society came into being. We cannot yet certainly forecast the result of National Health Insurance as it affects us, or of the test case, or of recent legisla-tion and the Ministry of Health's as yet imperfectly developed schemes. In commenting week by week on such events as these, errors of judgment are sure to occur: the critic is no more infallible than they whose action he criticises, and he is as likely as they to fall into apparent inconsistencies. The adjustment of oneself to new conditions as they arise is not an easy task, or one that gives much opportunity for what is so often demanded, a "constructive policy." Our actual policy has necessarily had more of the character of accommodation to circumstances than preconceived design, and where this is the case the mere critic may serve a useful purpose. Certainly he will not find his occupation gone.

## There are Two Sides

to every question, and the question of the future of the Major man is no exception. In the article which Mr. A. J. Jones so ably and temperately criticises I wrote from the business point of view, as a business man to business men; the following weck I glanced at the question from the other side, and gave what seems to me its full value to the argument for the higher education of the pharmaceutical chemist. That argument is based—even as Mr. Jones presents it—upon an if: "If that development carries with it a legitimate place for members of the pharmaceutical body," says Mr. Jones, "then," etc., etc., and with that my notes arc in entire agreement. That there is a reasonable prospect of such development I neither affirm nor deny, but it appears to me questionable; remembering the hopes held forth to us in 1868 and the way in which they were frustrated, I am, indeed, more than a little sceptical. We have rivals and opponents now as hostile and persistent as any we had then; our hopes may prove as baseless, our aspirations as futile. Meanwhile we are, as the phrase goes,

# Not in Business for our Health,

and, since the whole calling of pharmacy will inevitably be affected for good or ill by this new departure, those with whom business considerations necessarily have most weight not unnaturally look at it with a critical eye. Their view may be "one-sided," but the side they see is by far the most important to them, and the most certain; we do not know what lies on the other side of the moon. I do not deny that there is much force in what Mr. Jones says, but I doubt the practicability of his views. Pure science is a jealous mistress; no more than religion will she tolerate the attempt to serve two masters; and though I should be glad to see our Society produce men of the type Mr. Jones desires, I am persuaded that, if ever that type becomes the ideal at which all pharmacists aim, our present occupation will be in jeopardy. As a matter of fact, the Society already produces such men; she has her Squires and her Martindales, and we should all like to see their number increase. Let us by all means encourage their production, but with this caveat—pharmacy is not a pure science, and its relations to science may easily be exaggerated. The scientific, as distinguished from the ordinary pharmacist, must always be in a small minority so long

as pharmacy means (in the words of our charter) "the business of chemists and druggists," and it is that business by which even the pharmaccutical chemist gets his living. Any development that tends to obscure this fact, or to divide our house against itself, should be watched in the spirit of the Horatian maxim, Festina lente.

## Miss Adams, of Aberdeen,

is very bold: not content with declaring that women are essential to pharmacy, she claims that they were the original pharmacists. This cannot possibly be allowed. Women, indeed, manage to be beforehand with us in most things; Sir Thomas Browne goes so far as to maintain that they anticipated the serpent in the art of lying, for (says he), "although it be said, and that very truly, that the divell was a liar from the beginning, yet was the woman the first expresse beginner, and falsified twice before the replye of Satan.' The good knight goes perhaps a little too far here: Eve's misquotations of the divine injunction may have been due merely to a—shall I say feminine?—losseness of apprehension. According to Æschylus, Prometheus was the first pharmacist; it is not till we come to Medea that we find a lady who is seriously put forward in this character, and she is so only by inference: "sorcerer" seems a more appropriate title for her. There were women pharmacists in the Middle Ages, but none, I dare to guess, among the Arabs. The contention that the entry of women into pharmacy has caused a rise in the salaries of assistants is a case of post hoc propter hoc reasoning, but this, too, may be only Miss Adams's fun.

# Methylated Spirit

affords a good instance of the effect of recent legislation in the restriction of trade. A man I know well was, some weeks since, ordered by his medical attendant to use methylated spirit for a specific purpose. To his surprise he found that the chemist he went to had given up stocking "the stuff" as not worth the bother it caused him. The same thing is happening, as I foretold that it would, in the case of "dangerous" drugs, and it will infallibly happen on an immensely larger scale with "Key Industries." At present the Act dealing with them may cause nothing worse than hindrance and annoyance, but it will ultimately prove prohibitive if it continues to be worked on the same lines. Even now it hampers trade terribly, and it is morally certain that some, at least, of these industries will not be persisted in under such discouraging conditions.

## The Character of the Prescriptions

given for dispensing at examinations in practical pharmacy at some schools is sufficiently extraordinary to astonish one whose only experience of the art has been in a chemist's shop. A large batch of these collected by a student who had been required to dispense them was shown to me some time since, one of which was for twelve pills, each containing 5 minims of tr. nuc. vom. and 5 of liq. arsenicalis. Another ran thus: "Send 4 oz. of a solution of hydrarg. perchlor., such that one teaspoonful in a pint of water shall make a solution of 0.05 per cent." There has, I am told, been a good deal of dispute as to how the former of these should be dispensed, a fact which in itself shows the prescription to—be one that ought not to be set. I make bold to say that it cannot be accurately dispensed, since exact equivalents of the ingredients cannot be got into a pill. The other is almost equally out of place in an examination in dispensing; it is more suitable in an arithmetical paper. These are ingenious exercises, but they are not practical pharmacy, for no doctor in his senses would write such prescriptions, and one wonders why the students are required to dispense them. Surely it is not so in the Qualifying examination?

On the windows of a small hotel in the City of London posters have lately been affixed bearing, in very large type, the letters "D.D."—only that, and nothing more, as we read in "The Raven." The most ancient authorities are agreed that the letters have no reference to the Dangerous Drugs Act.

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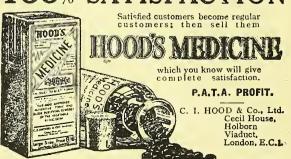
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# Editorial Articles

# Organised Research

WE have followed the vicissitudes of the Department of Scientific and Industrial Research since its establishment during the war, and now, in the sixth annual report, it seems as though the policy of the Department has reached the stability point. The report, which deals with the year ended July 31, states that the expenditure was £462,650 1s. 9d., made up of £373,821 7s. 2d. from the Exchequer, £38,022 13s. 6d. from the interest on the Million Fund, and £50,806 1s. 1d. from fees for tests. The Advisory Committee makes a reasoned protest against the proposed cutting down of the expenditure by the Government. Such a reduction would not be necessary if a proper curb were placed on the bureaucratic tendencies of the elder Departments of State. Dealing with the progress made during the past year with the scheme for co-operative research by the industries, it is noted that six new associations have been established, bringing the number up to twenty-four, while two more associations have been approved, and will shortly be incorporated. In describing the work that has been done by the various organisations controlled by the Department, some interesting details are given, to some of which we refer. Dealing with the National Physical Laboratory, it appears that one of the officials has been nominated as Deputy Warden of the Standards, and has become responsible for the maintenance of the legal standards of length and mass. The rescinding of the order relating to the testing of clinical thermometers for export led to a large reduction in the number of thermometers sent for test, but the number of instruments tested for use in this country is well maintained. The Fuel Research Board has found that the use of steam in vertical gas retorts results in a gain in the conversion of the heat units of raw coal into therms in the form of gas amounting to from 25 to 50 per cent., according to the type of coal used, and there is also substantial gain in the yield of tar and sulphate of ammonia. Experiments carried out last year on the cultivation of Jerusalem artichokes indicated that very good yields of alcohol per acre could be obtained, and if the results are confirmed the possibility of growing the tubers for the production of alcohol will be considered. The stems can be readily converted into paper pulp. The Chemistry Co-ordinating Research Board has made arrangements for investigating the possibilities of the production of formaldehyde in this country, in view of its importance in the manufacture of disinfectants and insulating materials. In connection with the work of the Adhesives Research Committee mention is made of the production of an adhesive from the oil-free residues of castor beans of good general quality for use in the manufacture of plastic materials and distempers. The most important results attained by the Oxygen Research Committee are to be published in the form of a handbook.

The Gas Cylinders Research Committee has found that lighter cylinders made from high carbon steel may, with certain guarantees, be safely recommended, but the railway companies disagree with this conclusion. Standardisation of the fittings of gas cylinders is to be considered next. Research conducted at the British Museum has resulted in devising a process for the removal of the coloured spots which form on etchings, while it has been found that paintings in which the white lead used has become blackened can be reconverted to a white compound by means of peroxide of hydrogen. A solvent has also been discovered for removing oil and varnish stains from drawings and prints. Further details are promised of these and similar discoveries. The work on glass has been continued at the Institute of Glass Technology in the Sheffield University, the object being to raise the industry from an empirical to a scientific base. Society of Dyers and Colourists has carried out a research on resin, and has prepared optically active pimaric acids of opposite rotation from French and American samples of resin. Derivatives of the acids have been prepared which are expected to throw some light upon the chemical constitution of the original resin. An appendix to the report deals with developments of research in the Overseas Dominions and some foreign countries.

# . Oilseeds and Oils

About a month ago there appeared to be a vague impression that oilseeds and their oils were about low enough in value after a substantial fall, and some improvement ensued, which was especially noticeable in linseed oil, which recovered at one period to well over £30 per ton for spot delivery in London, while crude cotton-seed oil showed some resistance at about £42 per ton; but there followed a renewed severe depression within the last few weeks. Linseed oil on the spot collapsed to as low as £25 10s., and, although there has been a steadier feeling since, with a rally of a few pounds a ton, the outlook has grown more complex, so that a hand-to-mouth policy is adhered to by consumers, while the feeling in cotton-seed oil is rather less depressed at the moment, the price having rallied a little after dropping in the course of November down to about £34. The difference in value between the two oils has been very materially reduced from what it was some time ago, but it is still abnormally wide, while the value of cotton-seed oil over a year ago was a long way below that of linseed oil. The fall in seed prices has naturally had its reflex on the oil products. This is clearly the case with linseed. which, after rising this year to close on £23 per ton for River Plate, crashed down to about £13, while linseed oil was affected to the extent of about £18 a ton, largely under the influence of the recent forecast of a coming crop far more formidable than the current one, which apparently had already eclipsed all previous high records. In contrast to linseed, fluctuations in cotton-seed values, in spite of the recent slump of roughly £8 per ton in the oil product, were relatively narrow, the current quotation of Egyptian black seed being in the neighbourhood of £12, compared with £13 early in November and about £14 10s, prior to the recent general depression. This gives some idea of the curious anomalies which have been experienced in the chief descriptions of seed oils. There s no doubt that the material decline which has taken place n prices for various kinds of foodstuffs has had some pearing on the state of the market for seed oils, as well as for some of the tropical produce which enters largely into the manufacture of foodstuffs.

Agricultural produce has experienced a headlong slump within the last two months, dairy articles having felt the full effect of this, and it is perfectly obvious that an outlet for nuts and kernels could only be secured at very considerably reduced prices, these products being largely used for the manufacture of margarine. It is not surprising, therefore, that, although a magnificent trade has been established in this country in nuts and kernels since the war started, our imports have suffered a considerable set-back this year, the total for the ten months to the end of October being 340,061 tons, or 55,500 tons less than for the corresponding period of last year. A large portion of this trade, whatever it was prior to the war, was in the hands of Germany, and it is to be hoped, therefore, that the set-back is only temporary, and chiefly the outcome of decreased home buying power under generally adverse conditions. The most interesting feature in the position of seed oils at this juncture relates to linseed oil, regarding which prospects are extremely uncertain, especially in the absence of anything like an active trade demand. The crushing industry has to face a new problem owing to the conspicuous superabundance of linseed supplies in sight for the coming year from the Argentine, whose huge resources should put the world's markets to a very severe test. Moreover, the next Indian crop promises to be very large, and is thus also an important factor to be reckoned with. So far as can be gathered at present from the excellent reports about the Argentine crop, the harvest should be getting under way in another fortnight or so, and new seed thus begin to be available when a good surplus of old crop is still waiting to be disposed of. This surplus is now estimated to be about 130,000 tons. The quality of the new crop is said to be excellent. The quantities afloat to Europe have fallen greatly in the last two months from close on 200,000 tons to 78,000 tons, of which only about one-third is destined for this country and the rest for the Continent. At the same time, crushers have been faced with heavy arrivals for some time past, and, although the demand has shown improvement of late, it seems certain that they will not be inclined to commit themselves to new contracts much in excess of their prospective requirements. They will prefer to wait until it is possible to get an adequate idea how far the market will be affected when the full weight of the gigantic Argentine crop makes itself felt. Then, again, it is difficult to form an opinion as to a general trade recovery and the extent to which America may add to her takings from the River Plate after the considerable falling-off noted for the current year, compared with the previous year, when America absorbed unusually large quantities of Argentine seed, which enabled her to export a considerable tonnage of oil to Europe. Conditions this year have thus been reversed, while exports of linseed oil from this side to the United States experienced a very large increase. A remarkable feature this year has been the material growth of our export trade in linseed oil, the returns of which were more particularly heavy within the last four months; the total of unrefined vegetable oils exported in ten months amounted to over 77,000 tons, of which close upon 46,000 tons consisted of linseed oil: During the same period 11,254 tons of refined vegetable oils went abroad, Germany absorbing a large tonnage. The official returns of imports of oilseeds into Great Britain for the ten months ending October are also very interesting. especially in regard to linseed, the total of which was over 423,000 tons, compared with 292,000 tons for the corresponding period of 1920, and it is now

anticipated that there is a probability of the returns for the whole year reaching quite half a million tons. On the other hand, there was a reduction of about 54,000 tons in our receipts of cotton seed, which for the ten months aggregated 313,634 tons, the large increase in the contributions from Egypt having been offset by a big shrinkage in receipts from India. Taking the whole of the imports of oil-bearing material, such as handled by the seed-crushing industry, including nuts and kernels, the total supplies which came into the country during the ten months to the end of October represented 1,165,157 tons, compared with 1,126,305 tons for the same period of the previous year. The figures thus actually show an increase, in spite of the trade depression, the chief reason, of course, as disclosed elsewhere, being the huge increase in the resources of linseed. The imports of soya beans have appreciably increased, amounting to about 30,000 tons, to over 42,000 tons, but this trade is still very small compared to what it was prior to the war. The supply of rapeseed has continued very limited, representing for the ten months only 21,881 tons, against 26,594 tons in the previous year. Indian crop news relating to rapeseed, however, is more satisfactory, and the coming year should see a larger movement of supplies to home and Continental ports. Russia so far has remained entirely out of the picture, either as regards linseed or rapeseed.

# The Farcical Pharmacy Bill

In referring to this Bill (C. & D., November 12, p. 56) we expressed the opinion that the Institute of Chemistry would not care to be associated with such a scheme as that outlined in the Bill. This surmise turns out to be correct, as the Institute of Chemistry has issued the following letter:

The attention of the Council of the Institute of Chemistry of Great Britain and Ireland has been directed to "a Bill to regularise the position of all persons trading as chemists and, druggists or pharmacy-store proprietors in the sale of drugs, the dispensing of doctors' prescriptions, and the sale of medicine." The official print states that the Bill was presented by Captain O'Grady, and supported by Colonel Watts Morgan and Mr. Casey. In this Bill reference is made to "the Incorporated Society of the Institute of Chemistry" and to "the Institute of Chemistry." The Institute of Chemistry of Great Britain and Ireland is the only body in this country incorporated by Royal Charter whose title contains the words "Institute of Chemistry," and the Council of the Institute desire me to inform you that they have not been consulted with regard to the provisions of this Bill, and have not had any information regarding its promotion.

The Institute of Chemistry is established to examine and

The Institute of Chemistry is established to examine and register persons found competent to practise chemistry in its applications to the arts and manufactures, as distinct from those who practise pharmacy and are engaged in the sale of drugs and medicines, and in the dispensing of prescriptions. The Council of the Institute deplore the confusion which arises through the application of the term "chemist" to two distinct callings, and they would welcome any legislation which would tend to remove this confusion. They hold that the use of the distinctive titles of "chemist" and "pharmacist" to denote these callings would tend to the general recognition of the difference between them, and to the removal of a confusion which exists in no other country. The Council wish to dissociate themselves from the suggestion that they should be represented on the Central Council, which it is proposed in the Bill shall be concerned with the Pharmaceutical Register, and from taking any part in the examination and registration functions vested by Royal Charter and the Pharmacy Acts in the Pharmaceutical Society of Great Britain. The Council do not feel called upon at present to comment upon the other provisions of the Bill.

The object of the promoters of the Bill was apparently to get it printed at the public expense, and it is a pity that the promoters cannot be made to reimburse the waste of the nation's money.

# The Dental Board

The first public meeting of the newly constituted Dental Board was held on December 7 at 44 Hallam Street, London, W., which at present the Board will share with the General Medical Council. There were present Messrs, Laurence G. Brock, C.B., Dugald McCoig Cowan, M.P., appointed by the Minister of Health, and the Scottish Board of Health respectively; Sir J. Hodsdon, F.R.C.S., Mr. Holburt Waring, F.R.C.S., and Sir A. Chance, representing the General Medical Council; and six dentists: F. Butterfield and H. A. Robertshaw, appointed by the Privy Council, W. H. Dolamore, M.R.C.S., L.D.S., W. H. Gilmour, M.D.S., appointed by the Ministry of Health, Ed. Leo Sheridan, F.R.C.S., appointed by the Lord-Lieutenant of Ireland, and Wm. Guy, F.R.C.S., appointed by the Scottish Board of Health. Mr. J. Sinclair, appointed by the Lord-Lieutenant of Ireland, was absent through illness. The President, the Right Hon. Francis Dyke-Acland, was in the chair, with the solicitor and the Registrar of the General Medical Council, and now also of the Dental Board, on either hand.

## PRESIDENT'S ADDRESS

The President in his opening address expressed their sense of good fortune in having the utmost sympathy and good will of the General Medical Council, who had in addition placed the long experience of the Council unreservedly at the service of the Board. Touching on the history of dental administration, he would not, he said, stray in the realms of practice, or remind them that thirty or forty thousand years ago the teeth of the Rhodesi in skull contained caries. He need go back only sixty-six years to find the beginning of the two movements which to-day had reached a definite development. One was the movement by the dental profession to obtain recognition from the medical profession, and the other from dentists who had obtained this recognition to obtain recognition from the public that they alone were fully qualified. The Medical Act, 1858 (which set up the General Medical Council), recognised the authority of the Royal College of Surgeons to examine and grant certificates to dentists. A rapid growth in the number of persons who did not obtain the diploma caused difficulties which were finally settled by the Dentists Act, 1878, which prescribed a penalty for the use of the title of dentist unless registered under it, the duty of keeping the Register being imposed upon the General Medical Council. Difficulties arising out of registration and of legal decisions (the House of Lords in 1910 gave a decision which brought within the lawful occupation of any man the practice of dentistry provided he did not use the description of dentist or dental practitioner) had gradually led to the third and final solution of the troubles of the profession which they were now called upon to administer. When the recent Dentists Bill came before the House he, the chairman, had never known ministers hesitate so much about legislation, or handle it so easily and so competently when once it was undertaken. They were greatly assisted, he added amidst laughter, by the lack of interest the House showed in the matter.

# STANDING ORDERS

The draft of the new Standing Orders was then brought up by the President, and considered seriatim, a copy of the draft being sent to the General Medical Council, so that they might have time to consider it before they meet next Thursday. The election of committees, discussion of regulations, warning notices, payment for premises, etc., promise to take up the remainder of the week.

Supply of drugs for tuberculosis.—Attention was drawn to an expenditure of £7,000 for drugs at a meeting of the Staffordshire, Wolverhampton, and Dudley Joint Committee for Tuberculosis, on November 26, and it was suggested that these should be purchased in bulk for the whole of the institutions under the Committee's jurisdiction. Dr. Reid said that the Ministry of Health strongly urged authorities to limit the amount of drugs used.

# Is Santonin a Fine Chemical?

Owing to unforeseen circumstances we were prevented from giving an adequate report of this ease last week.

THE hearing of the santonin appeal case on November 26, of which we gave a short account in our last issue, commenced at ten o'clock at the Board of Trade Offices, Great George Street, Westminster, and, with the exception

of a half-hour's interval for luncheon, lasted until 5.30.

Mr. Kenneth Swan (instructed by Stephenson, Harwood & Tatham), in opening the case for the appellants, said he would have to enlarge in some detail on the characters of the specific groups of bodies contained in the Schedule to the Act, as it was clear from the express language which was used that there must be some chemicals which these groups were intended to exclude.

The referee (Mr. Cyril Atkinson, K.C.) intimated that it would help him if Mr. Swan would tell him what he meant by "chemical," "organic," and "fine."

Mr. Swan explained that santonin is what is known technically as a bitter principle, and is found in Artemisia maritima, which grows in considerable quantities in Southern Russia and Turkestan. It is extracted therefrom by a simple process, being present to the extent of about 2 to 2.5 per cent. The market for the drug is at present England, which is the distributing centre. Prior to the war Germany had the control, but to-day the santonin produced in Russia is distributed principally from England. The complainants have established this market, and export considerable quantities to America. At one time santonin was considered to be an alkaloid. It is in many characters sufficiently similar to the alkaloids to be called a quasi-alkaloid. It has no chemical virtue outside its medicinal properties.
And what is the meaning of the word "chemical"?
"Chemical" has a very vague, broad, and loose meaning. Every substance has a chemical composition; it is capable of being analysed into the various elements. Such substances as water are chemicals in the academic sense. To get at a more appropriate meaning it is necessary to consider the word "chemical" in conjunction with the words "organic" and "synthetic."

Mr. Swan then outlined the divisions of organic and

inorganic chemistry, and the history of early synthetic chemistry. Murray's Historical English Dictionary defines "synthesis" as "the formation of a compound by combination of its elements or constituents, especially applied to the artificial production in this way of organic com-pounds formerly obtained by extraction from natural products." It is now submitted that as santonin is not a products." It is now submitted that as santonin is not a synthetic, but a natural product, it is, by virtue of the rule, expressio unius, exelusio alterius, definitely excluded, since the organic compounds specifically mentioned are "synthetic organic chemicals." It is in this group that it must occur, if in any, and not in the group "all other fine chemicals," as no doubt Mr. Whitehead, for the Board, would contend. To give a homely illustration, if we had a specification like this: "Wild rabbits, rats, and other rodents," could it be said that tame rabbits came under "all other rodents"? The group analytical reagents does not give much difficulty, since they are a fairly well-defined group. The term "fine" is not a scientific term at all: it is a term of commercial usage, but has a somewhat narrow and defined meaning. The evidence will show that "fine chemicals" has been, and is, used to denote a certain class of chemicals, excluding alkaloids, essential oils, extracts, and medicinal preparations. It will be submitted that this narrow meaning of "fine chemicals" is consistent with the rules of interpretation applicable to such a case as this, and consistent with the obvious intention of the Act. The Board of Trade have evidently taken a wider view of the meaning of the words, have stretched the modulus of elasticity to its extreme limits, and have swept into their list every chemical which could by any conceivability be included by the words.

Mr. Swan next deal with the application of the ejusdem generis rule, eventually developing it on the following lines. The first and second groups, "synthetic organic chemicals" and "analytical reagents," form the genus whose common feature is artificial production. The third group, "all other fine chemicals," can, as general words, only include chemicals ejusdem generis with the groups

covered by the particular words.

Apparently the Board of Trade says that "all other fine chemicals' means all chemicals which are not agreed to fall in the list of "heavy" chemicals. If this could be maintained then the Act could have, and would have, merely said there should be a duty on "all fine chemicals." If the Board's interpretation is right, then, remembering that we have a fourth group, "chemicals manufactured by fermentation processes," which are substantially "fine" chemicals, it is equivalent to such an absurd classification as "Kent, Middlesex, all other English counties, and Surrey." It is submitted that the sweeping and inconsistent interpretation of the Board shall not be accepted, but that some definition of "all other fine chemicals" should be found which is consistent with the rules of interpretation and with the intention of the Act. After an exhaustive examination of cases bearing on the subject, and an indication of the nature of the evidence, Mr. Swan called his witnesses.

#### THE PROCESS OF EXTRACTION

Mr. Ernest J. Parry, B.Sc., F.I.C., F.C.S., barrister-atlaw, said he was an analytical and consulting chemist and had much experience in chemical nomenclature. He said that in any definition which he, and probably every other chemist who might give evidence, gave, there must be some reservations. It was impossible to give a clear definition of any one of the terms asked for; otherwise he would do the best he could, but he appreciated that holes could be pricked in all such definitions. Richter's "Organic Chemistry" classed santonin under the heading as follows : ." Under the heading Bitter Principles or indifferent substances is embraced a class of vegetable bodies, many of which have already found their place in the chemical system. Those yet uninvestigated (of course, that is *comparatively* uninvestigated) are aloin, cantharidin, picrotoxin, and santonin." Mr. Parry outlined the process by which santonin was prepared, and said it did not require very skilled supervision. Santonin was used exclusively as a drug, to expel worms from human beings and animals. The only santonin obtainable is that manufactured by the Soviet Government in Russia. Santonin cannot at present be made synthetically, as its constitution is unknown. If it were made synthetically it would, of course, fall within Group I. of the Schedule. In reply to the question, "What do you understand by the word 'chemical'?" Mr. Parry said, "In a very broad and purely scientific sense I think that any individual body, including such things as water, starch, and sugar, could be properly classed as chemicals. In a commercial sense the word 'chemical' does not include anything like so wide a group of bodies. I understand a chemical to mean properly a body which has either been brought into existence by chemical action or is itself used as a chemical

agent for the purposes of chemical reaction."

The term "chemical" was sometimes loosely applied to natural products used exclusively for medicinal purposes. Classes overlap continually. For example, sulphate of soda was used as an aperient, and also to a large extent in the arts. Many chemicals like aspirin were used solely as medicine, and were therefore drugs as well as chemicals. By chemical action he meant artificial chemical action. For example, if morphine be extracted from opium there has been no chemical action; morphine was built up entirely by the plant growth, and was not a chemical. But if morphine be treated so as to acetylate it into heroin there was artificial chemical action and heroin was a chemical. Dealing with camphor, he would term the Japanese product a natural product and not a chemical. But camphor was manufactured artificially by a process of reactions on turpentine, and he would call synthetic camphor a chemical. The definition of a chemical must have some reference to the method of production. He would understand a synthetic organic chemical as an organic chemical which has been produced by a process which is known as the synthetic or building-up process. In the modern acceptation of what

is known as synthetic chemistry one would not speak of water as a synthetic product, although it could be produced by combining hydrogen with oxygen. A synthetic process is really accepted as this: the gradual building up of a complex body from a simpler one by steps which can be followed step by step and the results accurately gauged. That is really the synthetic process. However the definition may be distorted, that is broadly what it means. He did not think a definition of organic was really possible, but everyone would agree that "organic" means a body falling within that group of bodies which are essentially members of the carbon, hydrogen, oxygen combinations, and always contain carbon. There are only a very few bodies over which a dispute could arise as to whether they were organic cr not. There were, prior to the discovery of modern chemical synthesis, and still are, a large number of methods by which organic compounds can be produced, such as condensation processes, isomerisation processes, etc., which are not to be regarded as synthetic processes at all. For instance, if you start with eugenol and heat with caustic alkali you convert it into isoeugenol. The two bodies have the same percentage composition, the same number of atoms in the molecule, and all that has happened by the treatment is to alter the relative positions of the atoms in the molecule. Isoeugenol would, therefore, be properly classed as a fine chemical—an organic chemical, but not a synthetic organic chemical. Santonin is obviously excluded by the expression "synthetic organic chemical." thetic organic chemicals." In the list prepared by the Board synthetic borneol was included, but natural borneol was not. He was familiar with the "Journal of the Society of Chemical Industry," the principal technical publication of its kind. In their classification of chemicals, etc., there was a heading "Fine chemicals, alkaloids, essences, and extracts," which was in use for twenty years or so, indicating a clear distinction between fine chemicals and alkaloids. In the issue of 1905, at page 248, there was a reference to santonin in which the following words occur: "Santonin may be regarded as an alkaloid containing no nitrogen." The witness did not agree with that to-day, but it was a view current at the time. But, although santonin was not exactly an alkaloid, it was not a fine chemical. In regard to the definition of the word "fine," he would not care to rush in where all the angels have feared to tread. But he apprehended that a fine chemical has to comply with most of the following attributes:

# A SUGGESTED DEFINITION

It must be a chemical in the sense he had defined that word; it requires considerable skill in its manufacture; it is usually of a high degree of purity; it is dealt with in comparatively small quantities; and it is expensive. He was sure, however, that bodies could be found which might be fine chemicals without answering to all of these descriptions, and bodies could be found which did answer to all these descriptions which were not fine chemicals. So that this, and other attempts at definition, could not be regarded as water-tight. To indicate the difficulties in the matter, one well-known dealer will head his list "Fine chemicals and alkaloids." Another will group both these under the heading "Pharmaceutical chemicals." There is no constant or uniform practice. The word alkaloid without further qualification would be understood to indicate a vegetable alkaloid. He put in the price-list of T. & H. Smith, Ltd., a well-known company of manufacturing chemists. This list was headed "Fine chemicals, alkaloids, pharmaceutical products," thus showing a clear distinction between a fine chemical and an alkaloid. The words pharmaceutical chemical are very wide, and may include many things. It is really a very loose expression. In his opinion the class "other fine chemicals" would include a large number of bodies made by a non-synthetic reactive disruption, for example, or by one of the other many non-synthetic processes, and it would also include a number of inorganic substances which are not properly included in the class of analytical reagents. In interpreting the wording of the groups under discussion, he would read the words "all other fine chemicals" in the following way: The primary object of the Act was to protect the synthetic

chemical manufacturer. There is no doubt of that if one knows what the condition of the chemical industry in the country is. Having protected the synthetic element, the next step was to protect the maker of analytical reagents, a business which has grown up during the war and is a specified trade, requiring protection. Then you have those bodies which are organic chemicals—fine chemicals—but not made by synthesis and therefore excluded from Group I. But you also have inorganic bodies which are not analytical reagents, and therefore excluded from Group II., so that the third class, "all other fine chemicals," picks up all those rejected by the particular words of Classes I. and II., but are still ejusdem generis with the bodies of those classes. Organic bodies prepared by non-synthetic processes are exceedingly similar in characters to those produced by synthetic processes. They are all first cousins, brothers and sisters. Taking quinine into consideration, the pure alkaloid is a natural substance occurring in cinchona bark, mostly in combination with organic acids. When quinine is treated chemically it becomes sulphate of quinine, a salt of an alkaloid, and therefore a chemical produced by the chemical reaction between quinine and sulphuric acid. He would not consider the pure alkaloid as a chemical.

## POINTS FROM A CROSS-EXAMINATION

In cross-examination, Mr. Parry again emphasised the difficulties surrounding the attempts at defining a chemical. To be scientifically accurate quinine sulphate would be described as partially organic and partially inorganic, but in common parlauce it might reasonably be called an organic chemical. It was the salt of an alkaloid, and was certainly not an alkaloid. He did not think the words "fine chemical" could be applied to the alkaloid quinine, but when you have turned it into the sulphate, hydrochloride, or hydrobromide he would consider it possessed all the attributes which he had set out as belonging to a fine chemical. He considered that the process for the extraction of santonin was simple. The English people could not get the raw material necessary for the manufacture of santonin in this country. If they could get sufficient of the raw material yielding a sufficiently payable amount, there is not the slightest reason why it should not be manufactured in this country. It was not correct to say that the raw material could be obtained from India. There has recently been found in India a wormseed which contained about 0.85 per cent. of santonin, as against 2.5 per cent. in the Russian seed. The Indian seed, if obtainable, would yield so little on a manufacturing scale as to be absurd as a commercial proposition as against Russian wormseed. He believed all attempts to manufacture santonin, except in Russia, during the past few years had failed and been abandoned.

Counsel then referred witness to an item in a trade paper which stated that "An importation from Switzerland has relieved the scarcity." Witness pointed out that this merely referred to the importation of stuff made in Russia from Switzerland, and did not mean that it was made there. He again emphasised that, while one dealer might refer to santonin in a loose way as a fine chemical, others did not, and the practice was loose and varied. But he had searched trade catalogues and had never seen santonin specifically listed under the unqualified heading of "Fine chemicals." He insisted that there was no reasonable prospect of santonin being made synthetically until its constitution had been definitely settled. He knew Cannizaro and Wedekind as chemists who had investigated santonin, and the latter had given a structural formula for santonin which is claimed to be probable, but no more than that. In the ninth volume of the recently published "Allen's Commercial Organic Analysis" Wedekind's paper is referred to and the following comment is made: "Several subsequent papers have appeared. The chemistry of the group is not yet fully worked out, but santonin probably has the formula shown." Witness did not agree that the process for extracting santonin was a complicated one. The fact that the santonin was loosely combined with lime, and the lime salt afterwards decomposed by means of an acid, did not alter the fact that the finished product

was identical with the santonin existing in the plant, and the use of chemicals was merely a means to get rid of the 98 per cent. of extraneous matter, and did not therefore make santonin a chemical. In his opinion the intermediate stages did not matter; because, in order to extract a natural substance, you used a chemical process, this did not make the natural substance into a chemical.

Witness repeated his definition of a synthetic process, and counsel asked whether it was not true that you might use in a chemical synthesis a body more com-plicated than the actual body you were synthesising. The witness replied: "I think we are a little at loggerheads there. If you are using a more complicated body as a tool in building up, that would not prevent the body from being synthetic." Reiterating the academic aspect of calling water a chemical or a synthetic chemical, the witness said that no chemist to-day would ever include water or the synthesis of water, as having the least relationship to synthetic chemistry as usually understood to-day. He agreed that if the alkaloid quinine (not its salts) were properly described as a fine chemical, then santonin would equally be a fine chemical. But he drew a marked distinction between the alkaloid quinine and the salts of the alkaloids.

The referee, at this point, asked counsel to put to the witness what he (counsel) was going to contend was the definition of a chemical. "He is the only man I have yet met," said the Referee, "who has given me a definition of 'chemical.' If you do not accept it, challenge it and put what your witnesses are going to say. It is going really to the year, rout of this to say. It is going really to the very root of this Schedule, what is meant by the word 'chemical.'" Eventually counsel put to the witness that if a substance is a prepared substance it is just as much a chemical, if it has got the other qualities of a chemical, if it is prepared even though it may be an extracted if it is prepared, even though it may be an extracted thing and not a built-up thing. The witness differed, saying: "That is a direct negation of my view."

# FURTHER EVIDENCE FOR THE APPELLANTS

After a short re-examination of this witness, Mr. Swan called his second witness (Mr. M. Salamon, B.Sc., F.C.S.). Mr. Salamon said that he considered the word "synthetic," as applied to organic chemistry and used in the Schedule, meant a laboratory-created replica of a naturally occurring organic individual of either vegetable or animal origin He agreed with the definition in Murray's Dictionary: "The formation of a compound by combination of its elements or constituents, especially applied to the artificial production in this way of organic compounds formerly obtained by extraction from natural products." He understood a fine chemical as a laboratory-produced material or chemical which is not a replica of naturally occurring chemicals. He would quote radium bromide as a typical inorganic fine chemical, and terpenyl acetate might be regarded as a non-synthetic organic fine chemical. From a purely scien-tific point of view, he would define a chemical as an individual substance of definite and uncerning constithic point of view, he would define a chemical as an individual substance of definite and unvarying constitution and composition. Very few things were not chemicals from this point of view. He agreed that from the more general point of view, Mr. Parry's definition is as good as any could be. He agreed with the last witness in regard to the separate classification of fine chemicals and alkaloids, and that santonin fell outside chemicals and alkaloids, and that santonin fell outside the class of fine chemicals.

Cross-examined by Mr. Whitehead, the witness said that he did not consider such substances as potassium bromide a fine chemical, and he would place chemicals produced by synthetic methods, but which were not replicas of natural substances, under the heading, "Other fine chemicals." He could not agree that it was proper to speak of quinine sulphate as an alkaloid; it was the salt of an alkaloid. He considered that the alkaloids themselves were properly excluded from the category of "fine chemicals."

# CONSTITUTION OF SANTONIN

This closed the evidence for the complainants, and Mr. Whitehead at once called Dr. John Fox, F.I.C., superintending chemist at the Government Laboratory. He had

heard Mr. Parry's description of the manufacture of santonin, and, broadly speaking, agreed with it. He had always regarded alkaloids as being of the very essence of fine chemicals. He had no doubt that santonin was a fine chemical. There was no justification for considering it as an alkaloid in any shape or form. He regarded a heavy chemical as a commercial product produced on a large scale, and frequently very crude, though not necesssarily. In general, the expression "fine chemical used in contra-distinction to "heavy chemical." He considered that the constitution of santonin was perfectly well known except as to the particular atom of carbon with which the oxygen was combined. He would regard quinine sulphate as a fine chemical, and it would be better to describe it as the salt of an alkaloid than as an alkaloid. In cross-examination, this witness stated that santonin had no relationship at all with an alkaloid. The absence of nitrogen was a deciding factor. It does not react as an alkaloid, and it was its bitter taste that originally caused it to be regarded in error as an alkaloid. He disagreed with the view expressed by Wedekind that santonin might be regarded as an alkafoid which contained no nitrogen. It would be utterly absurd to class santonin as an alkaloid in any of its chemical reactions whatever. His view of a chemical was that it was a reactive material obtained either in the elemental form or from the combination of a number of elements and one which is capable of entering into reactions or is itself The structure of santonin is well known; but he would not put it any higher than that it is only known approximately. It might be that an investigator would succeed in synthesising santonin at once, or it might take him five years. He could not define a fine chemical. Each substance must be dealt with on its merits. One must take into account its method of preparation, whether it has a chemical identity, how it is handled, who are the people handling it, the method of packing, the price, and several other items of that sort. He agreed that santonin

was used exclusively as a drug.
Mr. F. H. Carr, F.I.C., a director of The British Drug
Houses, Ltd., giving evidence, agreed with Mr. Parry as to the method of manufacturing santonin, but regarded it as a process requiring intimate skill and supervision. He considered that santonin was unquestionably a fine chemical. The words "heavy chemicals" relate, or are generally taken to relate, to chemicals which are handled in large quantities or chemicals which are of limited purity, even distinctly impure. Generally speaking, with few exceptions, a chemical falls in one or the other group. He would call a chemical either a pure element or a combination of elements which can be shown to have a uniform composition and which cannot, without undergoing chemical action, be separated into two or more different substances. That was as near as he could go. He did not agree with Mr. Parry's limitation that a chemical must be produced by artificial processes. In cross-examination the witness said that the term "chemical" was used irrespective of the use to which the substance was put. Sugar, water, and starch were chemicals. He would certainly call water a chemical, but not a light or heavy chemical. Sugar was a heavy chemical. Pure starch was a heavy chemical.

# BOARD OF TRADE'S VIEW

Mr. James Francis Ronca said he was an Associate of the Royal College of Science and of the Institute of Chemistry, and the principal staff officer of the Department of Industries and Manufactures of the Board of Trade. The view held by the Board as to what The view held by the Board as to what realised that the term was not a scientific one, that chemists did not as a rule speak of chemicals. They speak of compounds or elements. The Board considered the term in its conventional course and beginning to the term in its conventional course and beginning to the term in its conventional course and the term is a substantially as follows: the term in its general sense, and decided that the characteristic of a chemical was that it was a reactive substance, that it was a prepared substance, and that, generally speaking, it was a single identity so far as substance is concerned. They did not have a rigid definition. tion. The Board regarded chemicals as having to be prepared products, because obviously there are many

mineral products which have definite compositions and to which a specific chemical formula could be ascribed. For example, there is barytes. So long as barytes is the mineral barium sulphate and has been subjected to no preparation other than being dug out of the ground, the Board do not regard it as a chemical. Stress was laid on reactive qualities, since there are some prepared products which are used rather for their structural utility than their reactive quality. For example, there are plaster of Paris and cement, neither of which is regarded by the Board as a chemical. Directly the Board had the task of deciding what was a fine chemical they realised that it was a difficult one and that the words "fine chemical" are not scientific ones. The term more usually occurs in the branches of chemistry with which trade is associated, and it is used in economic discussions. Generally it is used to cover all those which are not heavy chemicals. There would be border-line cases, and in chemicals. There would be border-line cases, and in them the Board would apply further tests. These were, in the main, what kind of process is involved in the production: if it be a process which can be supervised widely by a chemist but left in so far as the stages are concerned very largely to skilled foremen without chemical supervision the probability is that it is heavy, but if it wants a substantial amount of skilled supervision and chemical supervision the probability is that it is fine. The Board also took into account the scale on which the stuff was made. He considered that the amount of preparation processary in the case of the amount of preparation necessary in the case of santonin brought it within the definition of a chemical substance. Asked whether the Board had included all substance. Asked whether the Board had included all organic chemicals which are fine chemicals whether synthetic or not, the witness replied: "I will not go as far as that, because we could have made the list much longer." When asked by the Referee if the Board had allowed their definition of "all other fine chemicals" to be coloured at all by Class I., the witness said they had not. They thought that the word "other" referred back to "analytical reagents," and not to "synthetic organic chemicals," because they knew so many synthetic organic chemicals which could by no manner of imagination be looked upon as "fine" or "analytical reagents." He was not the only person concerned in the preparation of the list, but was largely concerned in its preparation. They did not look upon gold and silver as chemicals. They were not used for their reactive properties. He would not limit the word "reactive" by saying "chemically reactive"; he would call a poison reactive, and he would say that santonin was used for purposes which were essentially chemical, because it is very nauseous to a parasite and drives the parasite from the upper bowel into the lower intestines. He would be very sorry to have to draw the line between chemical and appreciate action. organic chemicals which are fine chemicals whether synthe upper bowcl into the lower intestines. He would be very sorry to have to draw the line between chemical and physical action. When asked why the Board had included menthol, which is produced by purely physical processes, and is a natural product, and excluded camphor, which is produced by purely physical processes, and is a natural product, the witness replied "You have chosen a thing—menthol—about which we had a great deal of difficulty. I am sure my chief will forgive me making an approprement, which has not been forgive me making an announcement which has not been made before. We have investigated that particular substance for the last three weeks, and within the last three weeks we have got evidence to show that there are chemically prepared varieties of menthol. We propose to put 'R' against menthol in that list." The inquiry was adjourned until Friday, December 2.

### Another Dictionary Produced

On the resumption of Friday's proceedings, Mr. Swan cross-examined Mr. Ronca as to the definition of a chemical. It had been said on the previous occasion that a chemical was a substance used primarily for reactive purposes. Mr. Swan said he understood that "primarily for reactive purposes" meant that if a chemical were taken and it was caused to react with another chemical, that would be using it for a primarily reactive purpose. Mr. Ronca agreed that that would be a reactive purpose. He also agreed that the result of the reaction would be the production of another definite chemical. With regard to

the preparation of alkaloids for commercial uses, Mr. Swan asked whether the process of preparation of alkaloids was simpler or more complex than the process of preparation of santonin. Witness replied that some alkaloids were much the same as santonin, but some might be different. Dealing with the question of price, witness agreed that the price of santonin had been somewhere about 7s. or 9s. per lb.—indeed, he believed it went below that at one time—and that the present price was in the neighbourhood of £335 per lb. Mr. Swan pointed out that of the santonin imported into England not more than 3 per cent. was consumed in this country. Witness said he was not aware of the amount consumed, but he believed that a great proportion was exported. Mr. Whitehead said that Mr. Ronca had been questioned at the previous sitting with regard to literature on the question of fine chemicals. He had since looked the matter up, and had obtained a few books dealing with the question, all of which might help in the discussion of fine chemicals. Mr. Atkinson said that could be dealt with in re-examination. Mr. Swan produced a copy of the "Standard Dictionary of the English, Language," 1905 edition, in which he definition was "a substance obtained by, or used in, a chemical process." Mr. Atkinson remarked that that was about the seventh definition; all of them differed. Mr. Whitehead, re-examining, asked witness whether it was his opinion that if somebody was minded to manufacture santonin in this country the high price of the imported product would help? Witness said he was afraid it would. As to reaction, witness said santonin would chemically react. As an example, he said that research workers who had investigated santonin with a view to establishing a formula had prepared a great number of derivatives of santonin, showing that it reacted. The very effect of medicines largely depended upon chemical reactions. Mr. Ronca then referred, inter alia, to a book written by Sir William Pope, on "Science and the Nation," in which the au

# THE REFEREE'S QUESTIONS

In reply to questions put by Mr. Atkinson as to the meaning of the word "preparation," previously referred to by Mr. Parry, Mr. Ronca said he did not restrict the word "preparation" to methods involving chemical reaction, because there were certain fine chemicals which had to be prepared by methods involving fractional crystallisation, some of which were extraordinarily difficult to prepare. Mr. Atkinson said Mr. Parry's view was that a fine chemical must be something which was going to be used for purposes of chemical reaction, and he had explained that later on, as something which was used as a reactive property, involving the further idea that it was to be used in the manufacture of something else. Witness said he did not accept that as a necessary condition. Mr. Atkinson said the purpose of the Act was obviously to protect certain industries. "Industries" seemed to imply manufactures, or something akin to that. It was for the safeguarding of key industries, which meant that they were protecting the manufacture of some things which were going to be further used in the manufacture of other things. Was not that the idea of a "key" industry! Witness said he should say that a "key" industry was one capable of making something essential. That industry would provide the country with the organisation and the brains which could, if need arose, turn themselves in other directions, and, with the same equipment, the same plant, and the same mode of thought, produce things which were really vital. Mr. Atkinson said that if his own definition were right, the manufacture of santonin was not a key industry, because it could not be used in any further process. Witness said that the Board of Trade did not regard the manufacture of individual products as an industry in the sense of the Act. The industry that the Act covered, so far as chemicals were concerned, was really the chemical industry, other

than the heavy-chemical industry. They could not carry on the manufacture of these comparatively rare substances in competition with the world unless they were making use of an organisation and plant comparable with that which other people were using. The thing must be looked at as a whole. Mr. Atkinson said that a broad idea of the Schedule would seem to be that the Act dealt with manufactured things, as well as things which were going to be used for the manufacture of something else. The witness's conception of "chemicals" seemed to wander from the declared purpose of the Act, and included many things which could not be called industries or manufactures. He wanted to get at what Parliament had in its mind when it said "chemicals."

#### CLOSING SPEECHES

Mr. Whitehead then addressed the Referee on behalf of the Board of Trade. Dealing with articles produced for use in the manufacture of other articles, he said he doubted whether there was an article in the Schedule which could not be used in something else. If the Referee were to consider the matter from that point of view, why should the Schedule stop where it did? A barometer, though an article in itself, was used, say, to enable a man to fly an aeroplane, and santonin fulfilled a similar purpose in its own sphere. The one common factor of all those industries was labour, and if the matter were looked at from the point of view referred to there was no end to it. The view that the Board of Trade took on this question was that Parliament had said that a fine chemical was a substance which should be chargeable with duty, and, rightly or wrongly, the Board had said that once it was clear to them that any particular substance, whatso. ever it might be, was a fine chemical, they were bound to put it into the list, if they issued a list at all. If the Board of Trade had not taken that view, then the Board would have been the real taxing body, and not Parliament, and a blow would at once have been struck at the very foundation of the Constitution. Once the Board were satisfied that a substance was a fine chemical, or anything else, it had no option. Dealing with the case put forward by the complainants, it was, first and foremost, that santonin was not a chemical; secondly, if it were a chemical, it certainly was not a fine chemical; and, thirdly, even if it were a fine chemical, it was not a fine chemical within the meaning of the Schedule. With regard to the first point, Mr. Swan had said that it was not a chemical because it was a drug or medicine. While admitting that it was a drug, he (Mr. Whitehead) contended that that fact did not mean that it was not a chemical. Aspirin had been mentioned. Aspirin was undoubtedly a drug, but a well-known compound of salicylic acid; salicylic acids and salicylic were undoubtedly used in the form of chemicals. Then Mr. Ronca had mentioned in his evidence that there were natural drugs; later these were imitated by synthetic and other processes, and then, again, there were substances used simply as chemicals, the medicinal properties of which were discovered subsequently. Mr. Atkinson asked whether it was counsel's contention that natural drugs were chemicals. Mr. Whitehead said that a natural drug might possibly be a chemical, but he was submitting that while santonin was a drug, it was none the less a chemical because it was a drug. As to santonin not being a chemical, because it was not prepared, but extracted, he referred to the evidence which had been given as to the process for obtaining santonin. They started with a living organism, treated it with chemicals, and chemical reactions took place. Then further reactions took place, and, finally, the santonin was crystallised out of the resulting compound. How it could be seriously suggested that santonin was not a prepared substance really passed his comprehension. If he were trying to make out that santonin was prepared, and all he could rely upon was something physical, and not chemical, he might be in a difficulty, but he was under no such obligation. He submitted that santonin had a definite composition; it was a chemical, notwithstanding that it was a drug, that it had reactive qualities, and that, in fact, it fulfilled

every proper test that could be applied. The next point was that if santonin were a chemical, it was not a fine chemical, and Mr. Swan had distinguished between a chemical and an alkaloid. His (Mr. Whitehead's) answer to that, which he submitted was a conclusive one, was that santonin was not an alkaloid. Once it was established that it was a chemical, then, even on the evidence of Mr. Parry, it had all the attributes of a fine chemical. As to santonin being a fine chemical within the meaning of the Act, assuming it were established that it was a fine chemical, he submitted it should be included in the list. There was nothing in the two rules of construction which had been applied by Mr. Swan, and the Board of Trade had acted rightly in including santonin in the list of articles. Mr. Atkinson asked counsel whether it was his view that he should look at the matter in precisely the same way as the Board of Trade, without any regard at all as to whether it came into the spirit of the Act. Mr. Whitehead said that if it were decided that santonin was a fine chemical, then it should be included. If it were established, then following the intention of the Legislature, he submitted that Mr. Atkinson had no power to say that it should be removed from the list. Mr. Atkinson said he understood that the Board of Trade had not considered the purpose of the Act at all, and whether or not they were helping an industry. Mr. Whitehead replied that the Board of Trade had contended that Parliament had considered that.

Mr. Swan, on behalf of the complainants, briefly summarised the evidence given. With regard to Mr. Parry's definition, he submitted that this was an absolutely clear and working hypothesis. The Board of Trade accepted that so far as it went, but they also said that they must include certain natural products.

Mr. Atkinson announced that he would give his decision on Saturday, December 10.

# Retail Pharmacists' Union

Manchester. - A meeting of the Manchester branch was held on November 30, Mr. A. Hershberg in the chair. Mr. G. A. Mallinson, secretary of the R.P.U., said that although the Union had only been in existence a few months, the progress made was satisfactory, as out of a possible 7,000 they had already enrolled about 6,000 members, having held the membership of the Chemists' Defence Association and increased the number by 25 per cent. So far as the Union was concerned there is no tendency to compete with the Pharmaceutical Society. Mr. Mallinson then described the various schemes which had been successfully launched by the R.P.U., and outlined what it had accomplished in the auditing of chemists' accounts; a certified balance-sheet and a profit and loss account could be had to satisfy the income-tax authorities on special terms which they had arranged for with a first-class firm of chartered accountants. The R.P.U. did not make anything out of it, although special terms were only available to members of the Union. One of the main objects of the R.P.U. must be to improve the business training of the pharmacist. Mr. Mallinson outlined what the C.D.A. had done in regard to the Dangerous Drugs Act Regulations and the cases which had been dealt with. pointed out the great danger of treating these Regulations too lightly. He emphasised the value pharmacists got from the cover given by the C.D.A., and it behoved every man in business to be a member of the R.P.U. so that he would be entitled to that protection.

Sheffield.—A meeting of the Retail Pharmacists' Union, No. 5 Branch, Sheffield, was held on December 2, Mr. J. Gilbert Jackson presiding over a good attendance of members. It was agreed to support the proposed scheme of plate-glass and other insurances. The complete method of stocktaking was recommended to the members of the branch. Several matters of a private nature were dealt with. The R.P.U. cash-book was placed before the meeting by the chairman. It was decided to hold an annual dinner of the branch and that ladies be invited.

Chemical Society

AT the meeting held in Burlington House on December 1, Professor J. P. Thorpe in the chair, five papers were read. Mr. R. Mond (in collaboration with Mr. A. Wallis) presented two papers: Some Researches on the Metallic Carbonyls and The Action of Nitric Oxide on the Metallic Carbonyls. Some of these compounds are extremely difficult to produce, and in illustration the author stated that it took two years to prepare 117 milligrams of molybdenum carbonyl, a compound which is insoluble in benzol. Ruthenium dicarbonyl occurs as a brown powder, with the remarkable property of being soluble in water and in alcohol. The analysis of these compounds also presents considerable difficulties, particularly in view of the small amounts available. After describing the preparation and properties ascertained of a number of these compounds, the author proceeded to discuss the effect of nitric oxide on the carbonyls. It was found that these substances were decomposed in such a way as to be unable to enter into combination with other bodies. On treating nickel carbonyl in chloroform with nitric oxide, only a few centigrams of a blue compound was obtained, which decomposed at 90°, and was found to contain about 15 to 16 per cent. of nitrogen. Cobalt tetracarbonyl reacts with nitric oxide to form a cherryred liquid=cobalt nitrosocarbonyl. Iron also yields a nitropentacarbonyl in the shape of a red liquid.

Mr. C. K. Ingold (in collaboration with Messrs. E. H. Farmer and J. P. Thorpe) read an interesting paper on The Chemistry of Polycyclic Structures in Relation to their Homocyclic Unsaturated Isomerides. Part III.: Intra-annular Tautomerism. The author discussed at length the unexpected changes which take place in the structure of acyclic compounds when submitted to certain processes, which must be due to some fundamental fact which still awaits explanation. These mysterious changes which occur in cyclic compounds, and which were designated as resulting from the "perjured evidence" of their peculiar behaviour, were attributable to tautomerism, and more especially to intra-annular tautomerism. different products resulting from oxidation by potassium permanganate on the one hand, and on the other by potassium ferricyanide, were discussed, and the diffi-culties these differences presented in giving an exact interpretation to these conflicting results. Were we dealing with natural substances, the established structure would be readily accepted, but in the case of synthetically built-up compounds the question was much more complex, and the different behaviour to these oxidising agents raised doubts. The bearing of chlorine and bromine substitution, not addition as had been erroneously assumed by other workers, on the structure of such tautomeric forms was exhaustively dealt with, and illustrated by the aid of numerous slides, as well as the attempts made to stabilise the two substances resulting from a single tautomeric body, the one product possessing the bridged form and the other the unsaturated form. The importance of these tautomeric changes was illustrated by a practical example—viz., the synthesis of camphor from pinene. Pinene possesses two tautomeric forms in addition to a central formula; on chlorination the chlorine attaches itself to the central form, yielding bornvl chloride.

The Constituents of the Leaves of Acer Ginnala was the subject of the paper contributed by Prof. A. G. Perkin (with Mr. Y. Ugeda). Accr ginnala is a plant which occurs in Corea, and is extensively used as a tanning material,  $2\frac{1}{2}$  million pounds being exported to China. In view of its use for this purpose, the Japanese Government sent Mr. Ugeda to investigate its properties, and also erected an extracting plant in Corca, in order to ntilise the product for dyeing purposes. The plant to utilise the product for dyeing purposes. The plant was found to contain 15 per cent. of tannin, and it was possible to isolate an acer-tannin, which crystallises in three forms, of the formula C20H20O13, presenting all the properties of gallo-tannin. In addition, it was found possible to isolate a sugar = accritol, which crystallises in beautiful prisms, specimens of which were shown. The

plant is not suitable for ordinary tanning, and gives a blue shade on calico. The tannin was found to be in

many respects identical with hamamelis-tannin.

In his paper on The Vclocity of Decomposition of High Explosives in a Vacuum. Part III.: Mercuric Fulminate, Mr. R. C. Farmer described his observations, dealing particularly with the behaviour of the brown mercuric fulminate. On exposing it to a temperature of 80° a prolonged quiescent period was observed, whereupon decomposition begins abruptly and progresses uniformly; the white variety has a longer quiescent period. It was found that decomposition in the air did not differ from that in vacuo. The quiescent period is probably due to the presence of an inhibitory catalyst, and the arrest of decomposition at a later period is also most probably attributable to the formation during the process of a similar catalyst, the nature of which could not be established.

# Coming Events

This section of the "C. & D." is reserved for advance notices or meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Tuesday, December 13

Society of Chemical Industry, Institution of Mechanical Engineers, Storey's Gate, Westminster, S.W., at 8 p.m. Kinematograph films will be shown on "The Winning and Working of Suphur," "The Manufacture of Steel," and "The Metallurgy of Zine."

Ealing Pharmacists' Association, Eden's Restaurant, High Street, at 8.30 p.m. Meeting.

North London Pharmaceutical Association, Central Pharmacy North London Pharmaceutical Association, Central Pharmacy Club, at 8,30 p.m. Meeting to consider the question of branches of the Pharmaceutical Society and Retail Pharmacists' Union. South-West London Chemists' Association, Westminster College of Pharmacy, Clapham Road, London, S.W., at 8.30 p.m. Mr. F. Harrison Glew, Ph.C., on "Radium and Experiments."

Wednesday, December 14

Wednesday, December 14

Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, London, W.C., at 8 p.m. Professor H. G. Greenish, F.I.C., Ph.C., and Miss C. E. Pearson, Ph.C., on "Volatile Oils in Pills," and Mr. T. E. Wallis, B.Sc., on "Moths as Pests in the Pharmacy (Corcyra, Ephestia, and Borkhausenia)."

Royal Society of Arts, John Street, Adelphi, London, W.C. 2, at 8 p.m. Sir Walter Beaupré Townley on "Trade with the Netherlands East Indies."

Cardiff Pharmacists' Association, Bungalow Café, High Street, at 7.15 p.m. Whist-drive. Tickets (3s. 6d. each) from the officers and from Messrs. J. Murray, E. G. Howell, and R. Davies (Penarth). The number is limited to 100.

Leeds Chemists' Association. Mr. J. F. Simon on "The Manufacturing Side of Pharmacy."

Liverpool Chemists' Association, Royal Institution, Colquitt Street, at 8 p.m. Mr. John Keall on "The Recent Changes in Pharmaceutical Organisation and their Effect."

Manchester Pharmaceutical Association, Council Chambers, Houldsworth Hall, Deansgate. Discussion on "Business Topics."

Thursday, December 15

Thursday, December 15

Chemical Society, Burlington House, Piccadilly, London, W. 1, at 8 p.m. Messrs. G. T. Morgan and J. D. Main Smith on "Researches on Residual Affinity and Co-ordination (Part YII., Cobaltic Lakes of the Alizarin Series)."

Glasgow Pharmacy Club (Literary and Scientific Section), 165 Hill Street, at 8 p.m. Lecture on "The Hand Camera and Composition," by Mr. D. M. Filshill.

London (Western) Pharmacists' Association, Pinoli's Restaurant, Wardour Street, London, W. At 8 p.m., "special" meeting for modification of rules; at 8.30 p.m., meeting. Discussion to be opened by Mr. W. Browne on "Dispensing Problems and Worries."

Friday, December 16

Liverpool School of Pharmacy, St. Margaret's Hall, Princes Road. Students' dance and social. Tickets, 5s. each.

NORTH LONDON PHARMACEUTICAL ASSOCIATION.—The Hornsey chemists have arranged a New Year's social evening for members and friends at the Wellcome Club, Crouch End, on January 12. Local Secretary is Mr. D. Anderson, 21 Broadway Parade, Crouch End, N. 2

# Will.

Mr. RICHARD MAINPRIZE HILL, chemist and druggist, 24 Victoria Road, Scarborough, who died on September 21, left estate of the gross value of £4,572, of which £2,644 is net personalty. Probate of his will has been granted to his daughter, Miss Ada Moss Hill and Edward Robert Cross, 12 Filey Road, Scarborough, retired chemist.

# Associations' Winter Session

Lancashire (N.E.).—A meeting of the North-East Lancashire Chemists' Association was held recently under the presidency of Mr. R. H. McMyn. Congratulations were offered to Mr. B. Holden and Mr. W. H. Grimshaw on their appointment to the Blackburn Town Council by large majorities. It was agreed to organise a whist-drive and social early in the New Year. Councillor W. H. Grimshaw, Mr. R. Lord Gifford, J.P., and Mr. Lightbown have been appointed on the Pharmaceutical Services Sub-Committee, and Councillor Grimshaw and Mr. R. Lord Gifford, J.P., on the Joint Checking Sub-Committee of the Blackburn Insurance Committee.

Public Pharmacists.—The Public Pharmacists' Association held a meeting on November 30, when papers were read on Everyday Work in the Dispensary. Speaking of the work in a large outdoor dispensary, where speed is essential, Mr. Arthur H. Jenkin, the syphon expert of public pharmacy, referred to the saving of time that can be effected by the use of a syphon and graduated burette attached to each bottle containing a stock mixture in frequent use, the time usually spent in washing measures being thus saved. Medical direction labels should be differentiated in style, so that the possibility of error arising from the use of such labels printed in one style for different doses should not arise. Mr. G. W. Gibson and Miss C. Andrews dealt with dispensaries in the Poor-law Service. The great development that has taken place on the medical side of the service was referred to. The Poor-law pharmacist may be expected to teach, carry out x-ray work, or act on the staff conciliation committee. Mr. F. E. Bullen, speaking of work in H.M. Prison Service, indicated that H.M. guests" have small ground for complaint in regard to medical treatment and pharmaceutical service. An interesting discussion concluded a practical and useful

Southend-on-Sea. The Southend-on-Sea Association of Pharmacists are holding a series of scientific and technical meetings, to which the members of the medical and allied professions will be invited, and on November 25, in accordance with this plan, a lecture on Vitamines was given by Dr. Stanley White, of Parke, Davis & Co.'s physiological research department. There was a good attendance. Dr. White said: The vitamine element in food is essential to life, and that without it carbohydrates, proteids, and salts, which the older physiologists taught to be the only essential foods, are incapable of assimilation. He illustrated and proved this statement by a large number of charts, graphs, and lantern photographs of recent experiments on rats, pigeons, etc. The lecturer gave details of experiments with three forms of vitamines—one, a fat soluble substance the absence of which is associated with rickets, dental caries, pellagra and various skin and cye affections; and, two, water soluble, the lack of which causes beri-beri, scurvy, and nerve lesions. The chemistry of vitamines has not been pursued very successfully, but it appears that the fat soluble form is allied to the lipoids, and the water soluble to the purins. All three forms exist in the vegetable kingdom, chiefly associated with the aleurone grains and the germ of the seeds. The lecture was illustrated by lantern pictures, projected by Mr. Ingram Johnson. The chair was taken by the President (Mr. F. H. King), and Dr. J. F. Walker proposed the vote of thanks to the lecturer.

Stoke-on-Trent.—The annual meeting of the North Staffordshire Chemists' Association was held on November 29. Mr. T. Bentley (Uttoxeter) presided. Mr. Challinor (Fenton), hon. treasurer, reported that they had a small balance in hand. Mr. J. A. Dale (Stoke), reporting on the work of the Pharmaceutical Committee, said that the dispensing by chemists had been satisfactory. There was going to be an inquiry into the working of the Insurance Act, and he was sure that chemists would come out of it creditably. The rota service would probably be continued. Mr. Corner, hon. secretary, reported on the work

of the year. Mr. Bentley, after congratulating Mr. Kemp on his election to the Stoke-on-Trent Borough Council, then proposed Mr. Bloor (Longton) as President for the coming year. Mr. Dale, seconding, said he was sorry that Mr. Bentley was going to Uttoxeter; but Mr. Bentley assured him that he had no intention of severing his connection with the Association. Other officials elected were: Vice-Presidents, Mr. Kemp and Mr. Challinor; Secretary, Mr. R. Howson; Treasurer, Mr. S. Mott; Auditor, Mr. Shaw (Hanley). Mr. Mellor (Uttoxeter) reported that the classes at the Wedgwood Institute, Burslem, for Part I. of the Qualifying examina-Institute, Bursiem, for Part 1. of the Qualitying examination, were satisfactory, and Mr. Bloor promised to give a prize for chemistry, Mr. Mellor for botany, and Mr. Kemp one for physics. A discussion followed on the advisability of forming a local branch of the Retail Pharmacists' Union. There was a strong feeling against doing anything to harm the Association, but it was thought that a branch might be run concurrently with the Association. It was arranged that a dinner should the Association. It was arranged that a dinner should be held early in the New Year.

# S.E. Counties' Federation

The East Sussex County Association of Pharmacists held its adjourned extraordinary meeting on November 30, at Lewcs. It was considered the largest gathering of pharmacists that had taken place in the district. Mr. F. Filmer de Margar Wadhungt (President) cognited the chair and taken place in the district. Mr. F. Filmer de Morgan, Wadhurst (President), occupied the chair, and was supported by Mr. F. F. B. Wimshurst, Bexhill-on-Sea (hon. secretary). The various districts were represented as follows: Battle, Mr. K. H. Emeleus; Bexhill-on-Sea, Mr. R. W. Robbins; Brighton, Messrs. C. A. Blamey, F. W. Burgess, Edgar-Jones, J. Plowright; Eastbourne, Messrs. F. W. Bridger, H. C. Browne, F. J. Crisford, J. Forbes, G. A. Harmer, A. Mills, F. Temple, D. Marchant; East Grinstead, Mr. P. J. Dixon; Hostings, Messrs. H. E. Skyrme and F. W. Goodman; Hove, Messrs. F. J. Flatman and B. C. Greening; St. Leonards-on-Sea, Mr. H. E. Hulme; Seaford, Mr. L. Cameron; Uckfield, Mr. E. H. Farr; Worthing, Messrs. F. Roberts and H. Reynolds. Mr. F. Filmer de Morgan explained the objects of the meeting and asked for suggestions for the title, which was agreed as the Federasuggestions for the title, which was agreed as the Federation of South-Eastern Counties' Pharmacists' Association. Nominations for the chair were then asked for, and Mr. Robbins proposed Mr. H. C. Browne. This was seconded by Mr. L. Cameron and supported by Mr. Edgar-Jones. Mr. Browne proposed Mr. B. C. Greening. and said the Federation was looking to Brighton for a large amount of support, and he felt that Mr. Greening would in every way make a better chairman and be more able to solicit the support of their Brighton friends. Mr. Greening, however, refused to stand, and Mr. Browne was duly elected, with Mr. Greening as Vice-Chairman. Mr F. F. B. Wimshurst was appointed Treasurer, and Mr. D. Marchant Hon. Secretary. It was agreed: That Federation delegates should be composed of two representatives from each association, with an additional representative for each ten or part of ten; that meetings be held quarterly or as called by the Executive; that grants for hire of room, stationery, postage, etc., be made from the component associations in proportion to their voting power, travelling expenses not to be included. The Executive Committee is to consist of one member from each area, Brighton, Eastbourne, East Sussex, Hastings, Tunbridge Wells, and West Sussex, with the chairman and hon. secretary. Mr. Arthur Mills outlined the suggested objects of the Federation, which were for the betterment of pharmacy by co-operation, trust, and mutual good will and confidence in each other. A system for properly pricing prescriptions is to be one of the first considerations. He emphasised the importance of many things affecting pharmacy, the support that could be given to existing associations and societies and the usefulness of friendly criticisms, and suggested actions with regard to profitless patents, window-shows. etc. The secretary was instructed to write to the different associations and ask them to elect representatives.

# North Irish Pharmacists' Association

The annual meeting of the North Irish Pharmacists' Association was held on November 30, the President (Mr. J. A. Bingham) in the chair. There was a fair attendance. Mr. J. C. Culbert, M.C.P.S.I. (secretary), submitted the report, outlining the chief events of the year, which, he said, had been a critical one in pharmacy. These included the formal separation of Ulster from the rest of Ireland and its effect upon pharmacy, the Dangerous Drugs Act Regulations, the granting of a degree in pharmaceutical technology, the election of the Pharmaceutical Council, etc. He also recalled some of the activities of the Association, such as rearranging the scheme of tuberculosis Insurance dispensing; inaugurating the present scheme of dispensing charges; reorganising an effective trade Association which has grown from a membership of about 170 to 300, and instituting the general price-list; fixing a flat rate of wages for apprentices and instituting a pledge to prevent "poaching"; working out (in conjunction with the Ministry of Labour) a training scheme in pharmacy for partly disabled soldiers, propering the formation of for partly disabled soldiers; proposing the formation of a Business Council, which developed into the present All-Ireland Federation.

Ireland Federation.

Mr. R. W. McKnight, Mr. H. Lancashire, J.P.,
M.C.P.S.I., and Mr. James Guiler took exception to
a paragraph in the report as to stampeding the
meeting called with reference to the position of
the trade and the possible breaking up of the
Pharmaceutical Society in the six counties under
the separation of Ulster. Mr. Dundee defended the
report. Mr. Culbert maintained that the report was
correct, but had no objection to altering the phraseology. report. Mr. Culbert maintained that the report was correct, but had no objection to altering the phraseology. No effort was intended or had been made to break the Pharmaceutical Society, but there was a possibility that the law would cause it to be broken. The President pointed out that they were not desirous of splitting up the Pharmaceutical Society, but they merely held the meeting to take steps in case the changes in the Government of Ireland should make a splitting up necessary. The meeting was simply to protect the interests of pharmaceutical chemists in the North of Ireland.

Mr. H. Crail said that the meeting was not an N.I.P.A. meeting, but was called to give all pharmacists, whether in the Society or not, an opportunity of expressing

Eventually, on the motion of Mr. Hall, seconded by Mr. Crail, it was agreed to delete the paragraph objected to on the ground that the meeting to which it referred was not an N.I.P.A. meeting, and the report was passed. The financial statement submitted by Mr. James Guiler (for Mr. A. Wilson, trustee) showed a credit balance. The statement was adopted. Pursuant to notice of action, Mr. Crail moved (a) that the rule limiting the number of members of Executive Committee be rescinded; (b) that the General Executive Committee be composed of all those members of the Association who are not, by reason of office, already members of Committee; that this Executive Committee has power to delegate its authority for a specific object to a sub-committee; and that such sub-committee shall cease to exist on completion of object for which it was formed, or by resoluion of General Executive Committee at any meeting. Mr. Adams seconded, and the resolution was agreed to unanimously. The President expressed the hope that they would take up educational matters and lectures, and at a later stage of the meeting this was put as a resolution and agreed to. Several speakers said that the object in view could be met without the resolution, and it was withdrawn on the understanding that there should be a meeting of an educational nature at least once a quarter.

# ELECTION OF OFFICERS

On the motion of Mr. Bingham, seconded by Mr. Crail, Mr. James Dundee, University Road, Belfast, a founder of the Association, was elected President for the ensuing year. Mr. Dundee, having taken the chair, returned thanks and said the time had come when there should be

a definite co-ordination between the members of the Association and the members sent to the Council in Dublin to represent them. The Preliminary examination would also have to be thoroughly discussed. Mr. Bingham was have to be thoroughly discussed. Mr. Bingham was thanked for his services in the chair during the past year, and was elected a Vice-President in recognition of his work. Mr. J. C. Culbert was re-elected hon. secretary, Mr. A. Wilson hon. treasurer, and Mr. J. Guiler and Mr. H. F. Moore hon. auditors. Under the new resolution all members of the Association became members of Committee.

#### THE PHARMACEUTICAL COUNCIL.

Mr. H. Lancashire gave a brief report of his period of office on the Pharmaceutical Council. He said the Northern members would find great difficulty in getting anything carried in relation to alterations without the aid of the Southern members, who were in the majority. the whole, however, chemists were inclined to blame the Society too much. One of the greatest difficulties was finance. It was hard to foresee the outcome of the present situation. The Southern members were very anxious not to have any severance from their Northern brethren. Mr. Culbert said the watchwords of the Council were "Sit tight" and "Wait and see." How many members knew that a new order had been issued regarding special bottles for zinc chloride solution? The Society had never warned Drugs Act. The present condition of the Calendar was not satisfactory. On the proposition of the President a vote of thanks was accorded Messrs. Lancashire and Culbert for their addresses.

#### PRELIMINARY EXAMINATION

An interesting discussion took place on whether or not the Pharmaceutical Preliminary examination should be abolished and a University Matriculation examination or abolished and a University Matriculation examination or equivalent be required instead. The subject was introduced by the hon, secretary, Mr. J. C. Culbert, who recalled the fact that arrangements had been made by Queen's University of Belfast to give a degree equivalent to a degree in pharmacy. The present Preliminary examination of the Pharmaceutical Society is not accepted by any other body as any proof of scholastic attainment, and if they were going to take full advantage of these new facilities they would have to advantage of these new facilities they would have to try and co-ordinate the training. He suggested that a committee be appointed to consider the whole question of pharmaceutical education and training, to include a professor of Queen's University, a representative of the Technical Institute, several members of the P.S.I., and one or two members of the trade. Mr. Culbert read letters from Cross-Channel pharmacists showing that the abolition of the Preliminary had been beneficial. The whole duestion would be raised at the next Council-meeting. Mr. R. W. McKnight said the examination led nowhere, and should be done away with. If a student took the degree of B.Sc. in pharmacy at Queen's University could he open business? Mr. Culbert said "No." It would

not affect his legal standing.

Mr. H. Todd supported the Preliminary, though its standard was not as high as it might be. Its withdrawal would be a financial loss to the Society. Mr. Bingham said the University scheme was elaborate so far as it went. For years past the standard of apprentices was lowering and the supply of boys lessening. If that went on in a short time they would have nothing but girl apprentices. There was no reason why any boy coming into pharmacy should not take that course. entirely in favour of the abolition of the Preliminary.

Mr. Culbert said, in reply to a question, this scheme would only benefit the younger generation. Mr. Lancashire said there would be no financial loss in abolishing the Preliminary. After some further discussion the following resolution was unanimously passed: "That the Pharmaceutical Preliminary should be abolished unless the Pharmaceutical Society take steps to raise it to such a standard as to ensure its acceptance by the University and other authorities as equivalent to matriculation." The other authorities as equivalent to matriculation.' company afterwards dined together.

# Festivities

#### Blackpool Chemists' Social

THE Blackpool and Fylde Chemists' Association spent a pleasant evening at the Palatine Hotel, Blackpool, on November 30, on the occasion of the annual social. The attendance numbered about eighty. Whist was arranged, and there was dancing and dinner. The arrangements were in the hands of the President (Mr. H. Haw) and the secretary (Mr. O. Gillibrand).

Birmingham Chemists' Dinner

The Birmingham Pharmaceutical Association held the inaugural meeting of the session on November 30, which took the form of a dinner, the President (Mr. Atkinson) in the chair. After the loyal toast the President proposed the health of Sir William and Lady Glyn-Jones. This was responded to by Lady Glyn-Jones. Subsequently an interesting address was given by Sir William, who spoke of the progress made by pharmacy, and particularly by the Pharmaceutical Society. A vote of thanks to Sir William for his interesting address was carried with applause. A number of musical items were thoroughly appreciated. On January 18 the annual dance will take place in the Grosvenor Rooms.

# A Ucal Whist-drive and Concert

Members of the Sheffield and District branch of the Ucal Federation met in the Forrester's Hall, Sheffield, on December 1, under the presidency of Mr. Knowles. After high tea a whist-drive was held, prizes being presented to the following winners by Mrs. Knowles: Ladies—Mrs. Preston; Mrs. Cooksey; Miss Curtis. Gentlemen—Mr. H. G. Williams; Mr. J. H. Fox; Mr. J. P. Norwood. Subsequently a concert, in which Misses Anteliffe, Chester, Glover, Hallatt, Lee, Williamson, and Mr. H. B. Hammond assisted, added to the evening's enjoyment. A vote of thanks was accorded to the secretary, Mr. F. A. Lester, who had arranged the entertainment.

# Presentation to Dr. Inglis Clark

Dr. W. Inglis Clark, on the completion of his fifty years' connection with Duncan, Flockhart & Co., Edinburgh and London, was the guest of the evening at an "At Home" held on December 5 at Ferguson & Forrester's, Princes Street, Edinburgh. Mr. R. K. Kininmont presided, and an excellent programme of music was provided. Mr. McPherson presented to Dr. Clark an electric table-lamp of chaste design, and in making the presentation Mr. McPherson told the story of Dr. Clark's career. Mrs. Inglis Clark received a beautiful bouquet of carnations, Miss Finlay making the presentation on behalf of the employees, and Mrs. Inglis Clark replying. Tea was served during an interval in the programme.

# Cardiff Chemists' Annual Dinner

The annual dinner of the Cardiff Chemists' Association was held at the Queen's Hotel on November 30, the President (Mr. D. Brims) in the chair. Among those present were the Lord Mayor of Cardiff, Messrs. J. Keall and A. Hagon (members of the Pharmaceutical Council), Principal C. Coles (of the Technical College), Francis D. Phillips (President of the South Wales Pharmacists' Federation), and pharmacists, with their wives and friends, to the number of about seventy. The toasts to "The King" and "The Royal Family" being duly honoured, the President proposed the toast to "The Pharmaceutical Society." Mr. J. Keall (who was given a hearty reception), in responding, said he regarded the future of the pharmacist with great optimism, the key-note being co-operation and good-fellowship, which was growing stronger each month. Mr. A. Hagon also responded, mentioning that this year witnessed the coming of age of the Cardiff Association. "The City and Trade of Cardiff" was proposed by Mr. Leopold Joseph, J.P. the Lord Mayor responding. Mr. J. Murray proposed "The Visitors and Ladies," this being responded to by Mr. Francis D. Phillips, J.P. (Haverfordwest). In proposing "The Cardiff Pharmacists' Association," Mr. A. H. Purse (secretary of

the Cardiff Insurance Committee) gave interesting data of the work done by pharmacists. The Vice-President, Mr. A. J. Harris, replied. During the evening musical items were rendered by Miss L. M. Laugharne, Messrs. S. W. Hague and Dewi Davies, and humorous items by Mr. Owen Jones, all of which were much enjoyed. The arrangements were in the hands of Mr. S. H. Willis. The English and Welsh National Anthems brought the proceedings to a close.

### West Kent Annual Dinner

An enjoyable evening was spent on November 30 at the Royal Bell Hotel, Bromley, by members and friends of the West Kent Pharmacists' Association. At 7 p.m. a reception was held by the President, Mr. H. St. D. Francis, and Mrs. Francis, till 7.30 p.m., when the party proceeded to the Banqueting Room. There were about sixty guests, the leading wholesale houses being well represented. A delightful programme followed the dinner. Mr. French, Sittingbourne, secretary of the Kent Pharmaceutical Association, gave "The West Kent Pharmacists' Association," and Mr. C. G. Pinchen, Beckenham, suitably replied. Councillor Allan Bone, Chislchurst, proposed "The Officers of the Association," and Mr. George Shillcock spoke in reply. Mr. H. Wynter, Orpington, proposed "The Ladies and the Visitors," to which Mrs. Francis responded. Musical items, which interspersed the speeches, were a feature of the evening.

#### Bournemouth Chemists' Dinner

The annual dinner of the Bournemouth Pharmaceutical Association was held on November 30, under the presidency of Mr. C. A. Coles. After the loyal toast, Mr. S. Hardwick gave the toast of "The Pharmaceutical Society," and Mr. F. E. Bilson replied. The toast of "The Local Association" was proposed by Councillor Dr. T. B. Scott, who emphasised the cordial co-operation between the doctors and pharmacists. Mr. C. A. Coles acknowledged the toast, and expressed a wish that something should be done to bring the junior members of the craft together, and hoped that the Association would be in a position to formulate some scheme in the near future, Mr. W. A. Bingham, in proposing "The Visitors," coupled the names of Dr. G. A. Reid, President of the Bournemouth Medical Society, and Mr. W. Plomer, secretary of the Chamber of Trade, who suitably responded. Interspersed with the toasts, Miss Betty Tremayne and Mr. Kenrick Dean gave a number of songs, which added to the pleasure of the evening. Mr. J. H. Martin carried out the duties of toastmaster. The arrangements were made by Mr. W. A. Bingham and the hon. secretary.

# "Script" Sports Club

The annual dinner of the "Script" Sports Club was held on December 1 at Anderton's Hotel, Fleet Street, London, E.C. All the associations of London were well represented, the Presidents of each being also present. The editor of the "Script" (Mr. H. E. Skinner) was in the chair. During the evening Mr. W. E. D. Shirtliff. President of the Western Association, announced that he would present a prize for the runner-up in the billiard tournament row being played for the Keall challenge cup. Also Mr. Weight, of S. Maw, Son & Sons, Ltd., offered a prize for open competition in all sports with the London associations, to be arranged with a committee during the early months of 1922. Mr. E. A. Atkins, President of the South-Western, also challenged the other associations to competition in specified contests in various sports. It was announced by Mr. Death that the London Golfing Society's dinner would take place on March 23. After the loyal toast the secretary (Mr. J. Hearle) gave the result of the shooting competition for the Maw challenge shield: 1st round.—West Ham 507, Eastern 514, Northern 507, South-Western 562. 2nd round.—South-Eastern 525, Western 544, Eastern 518, South-Western 545. Final.—Western 545, South-Western 542. The Western, under Captain Shirtliff, thus become the holders of the shield

for the second year in succession. Silver spoons per Mr. Malcolm were presented to the team: Mr. Douch, 93.3; Mr. Shirtliff, 92.3; Mr. Roberts, 92.5; Mr. Smith, 90.6; Mr. Noble, 90.6; Mr. Grimwade, 89.0. The Keall cup for the highest individual score was won by Mr. A. R. C. Honiatt for the Northern, with 99.0. The bowls tournament for the Glaxo cup was won by the Northern team, with an unbeaten record.

	Pla	ayed	Won	Lost	Points	Average
1. Northern		4	4	0	229	57.2
2. Eastern		5	4	1	219	43.8
3. South-Eastern	• • •	6	3	3	169	23.1
4. North-Eastern	,	4	0	4	97	21.2
5. West Ham	• • •	2	0	2	40	20.0
6. Western	•••	1	0	1	19	19.0

Mr. A, H. Jenkin, President of the North London Pharmaceutical Association, received, on behalf of the team, the cup, which was suitably filled and passed round the company. Spoon tokens were presented to the team by Mr. J. Hearle: Messrs. Dow, Grassick, Rawlins, Downing, Perrett, Bennett, Honiatt, and McRostie, Mr. Downing thanking Mr. Hearle for the team. The President's trophy, a pair of bowls, for the singles championship resulted as follows: lst round.—Mr. C. H. Siddle beat Mr. Lusher-Pentney; Mr. Wilkinson beat Mr. A. R. Keith. 2nd round.—Mr. Siddle beat Mr. L. Kirkpatrick; Mr. Wilkinson beat Mr. Rawlins. Final.—Mr. Siddle beat Mr. Wilkinson, and thereby won the trophy; the Duncan Flockhart prize for the runner-up went to Mr. Wilkinson. The Eastern trophy was won by Mr. A. T. Styles and the North-Eastern trophy by Mr. G. Lusher-Pentney. An idea was mooted from the chair for the formation of a Pharmacy Athletic Club to cover all sports, and it was pointed out that headquarters might be obtained if there was a sufficient rally. The entertainment programme was provided by Messrs. Widgery, Millner, Coward, Atkins, Keith, Bowie, Watson, and Barrett, with Mr. J. Watson Mills, B.Sc., F.I.C., at the piano. A most successful evening closed at a late hour with "Auld T. L. Comer." Lang Syne.

# Almanacs and Calendars

WE have received copies of various almanacs, calendars, and similar publications distributed at this season by wholesale houses and retail chemists. Those that have reached us up to the present are quite equal, and in some cases superior, to corresponding pre-var types, following are of interest to the trade.

In order to aid the British Red Cross Society, ABDULLA & Co., Ltd., cigarette manufacturers, 173 New Bond Street, London, W. 1, are issuing, for sale, at 1s. 6d. each, 10,000 wall calendars ( $15\frac{1}{2}$  in. by 12 in.), having each month on a separate sheet. The sheets are not fastened together, and can be framed afterwards if desired. Each sheet contains a coloured illustration (6 in. by 9½ in.) drawn by a well-known artist.

LAWRENCES, chemists, 44 Great Charlotte Street, Liverpool, issue two artistic wall calendars, measuring respectively  $12\frac{1}{2}$  in. by  $9\frac{3}{4}$  in. and 11 in. by 7 in. The larger of the two has a reproduction in colours of "The Bluebell Wood," a painting in which a white horse and three children appear to be enjoying themselves in an equal degree in making their way through the wild flowers; the smaller calendar has for its central feature a pleasing cottage scene, also in colours.

WE have received a copy of the almanac for the year 1922 (8½ in. by 5½ in.) issued by T. Ridley & Son, chemists and opticians, Carlisle. This convenient little book, now issued for the twenty-ninth year, has a cover specially designed by Mr. Ashton Ridley, and its contents have expanded to sixty-four pages. The customary features have been renewed with excellent indement, and in addition, there is a nurgleexcellent judgment, and, in addition, there is a puzzlepicture, for the solution of which prizes are offered.

# Safeguarding British Industries

CORRECTIONS IN LISTS UNDER PART I.

The following corrections in the "Lists of Articles chargeable with duty under Part I. of the Safeguarding of Industries Act" are notified:

Page 43.—Insert prefix "R" before hæmoglobin.
Page 50.—Insert prefix "R" before menthol.
Page 54.—Insert prefix "R" before nickel oxide.
Page 65.—For "sodium monomethylarsonate" read "sodium monomethylarsenate."

#### More Cases Pending

A case dealing with the question of lost identity of mixed synthetic perfumes will shortly be brought in regard to an objection to the holding up of such goods by the Customs. Mr. Ernest J. Parry will be the expert chemist engaged in the case.—A case in which the Customs demand duty on the full value of goods containing only a fractional amount of a dutiable chemical will be before the Referee shortly. Mr. Parry will also give evidence in this case. We understand, too, that other cases pending will include milk-sugar and synthetic

CHEMICAL MERCHANTS AND USERS

The following resolution was passed at a meeting of the Chemical Merchants' and Users' National Vigilance Committee held on November 30:

(a) That after full and careful consideration, and bearing in mind that experiences during the war indicated that certain Key Industries should be fostered and safeguarded in the national interests, this Committee are of opinion that the list as published is wider and more far-reaching than was intended and does not show due regard to the scope and aims laid down during the consideration of the Bill by Parliament or to the powers conferred in the Schedule of the Act, especially in relation to chemicals.

(b) The Committee are of opinion that the published list contains many articles that are not made in the United Kingdom, that could not be made at a reasonable price if made at all, that do not come under the definition of Key Industries, and that, therefore, the list should be revised by the deletion of such articles.

(c) It is considered of paramount importance that a clear and authoritative definition be given of the precise meaning of the heading terms used in the Schedule, as obviously such definition dominates the Act and limits its

sphere and scope.

(d) Many substances in the list which are used for industrial purposes are neither chemicals nor fine chemicals for the safeguarding of which the Act was intended, and as such substances are commercially pure the word "crude" employed in the list should be replaced by the word "industrial" or the word "commercial" as being more in accord with the facts and as being less liable to

cause confusion and delay by the Customs authorities.

(e) That with regard to substances designated "R" it should be clearly stated that when they are imported for industrial purposes they are not subject to Key Industry duty, and that the duty is only applicable to chemically pure products for scientific and laboratory purposes, so that an importer may know when he makes a purchase

whether the duty applies or not.

(f) That there be issued uniform, clear, definite, and understandable instructions by the Board of Trade and/or the Commissioners of Customs, and that these instructions

should be made public.

(g) That provision should be made by the Customs authorities for the prompt and proper examination of the goods and for their release without any undue delay, and, in the event of goods being held up, suitable accommodation should be provided for storage by H.M. Customs.

# GERMAN GAS MANTLES

An effort to get gas mantles brought within the scope of the Safeguarding of Industries Act was made on December 3 by the Incandescent Mantle Manufacturers' Association, who, together with thorium manufacturers, complained before the Referee, Mr. Cyril Atkinson, K.C.

In their statement the Incandescent Mantle Manufacturers' Association say, among other things:

A gas mantle is a compound consisting of 99 per cent. of thorium and 1 per cent. of cerium in an oxide form. Apparently, for the purpose of more conveniently attaching a gas mantle to the burner, various mechanical devices are employed. Such devices do not contribute to the production of light, which is the essential intention of a gas mantle, and its illuminating power is solely derived from the thorium and cerium which compose it. A gas mantle of commercial efficiency cannot be produced except as a mixture of thorium and cerium in oxide form. On or about September 17, 1921, the Board of Trade issued a list purporting to define the articles chargeable with duties under Part I. of the Act as falling under the general description of compounds of thorium, cerium, and the other rare earth metals, set out in the Schedule of the Act. In the list defining the compounds of thorium, cerium, and the other rare earth metals there were included (inter alia) thorium hydroxide, thorium nitrate, thorium oxide, cerium hydroxide, cerium nitrate, which were different compounds of thorium and cerium employed in gas mantles, but gas mantles are not comprised in the list. The only commercial use of thorium is for the purpose of making gas mantles, and admission of gas mantles free of duty in effect cancels the inclusion of thorium and cerium compounds in the Schedule of the Act. Complainants contend that upon the true construction of the Act and of the words "compounds of thorium, cerium, and other rare earth metals" in the Schedule incandescent gas mantles should have been included in the list defining such compounds, and they claimed a declaration accordingly, and that the said list shall be amended by the inclusion therein of incandescent gas mantles among the "compounds of thorium, cerium, and other rare earth metals."

A counter-statement by the Board of Trade submits that upon the true construction of the Act and the Schedule the phrase "compounds of thorium and cerium and the other rare earth metals" meant and included only chemical compounds in the sense ordinarily understood by chemists, and did not include physical mixtures or mechanical aggregates, and, therefore, that a gas mantle was not a compound within the meaning of the phrase. In a statement by the Gas Council it was submitted that as gas mantles were not included in the financial resolution upon which the Act was based, they did not come within the scope of the Act. Mr. Terrell, K.C., on behalf of the complainants, explained that the manufacture of incandescent gas mantles was first carried on in Austria. It was at once a great success, and had become a great industry. It spread to this country, and at the same time extended to Germany, and later to Belgium and Holland. Incandescent gas mantles were composed of 99 per cent. of thorium. His claim was that the duty was leviable on thorium in any shape or form, and that, therefore, it was leviable on these gas mantles. Mr. E. White, F.I.C., and managing director of a firm which manufactures thorium, said that the importation of foreign-made mantles into this country was increasing, and in consequence his firm were experiencing a diminishing demand for their products. Mr. Hunter Gray, K.C., for the Gas Association, said that gas mantles were expressly excluded from the scheme of the Schedule. The proceedings were adjourned.

# WHAT IS A FINE CHEMICAL?

A valuable contribution to the controversy as to what is a fine chemical has been made by Mr. Chas. Alexander Hill, B.Sc., Ph.C., to the "Journal of the Society of Chemical Industry" (November 23), in the course of which he indicates that

the term "Fine Chemicals" cannot be restricted to chemicals of the purest grade that it is possible to produce or that is known; but they must be pure enough or special enough to be so classified, for example, as of B.P. standard enough to be so classified, for example, as of B.P. standard for a drug, and of A.R. standard for an analytical reagent. To carry this point and that of skilled labour to extremes, one may cite a specimen of metallic salt used for an atomic-weight determination; a substance of such a degree of purity would be prepared by the research chemist himself with his own hands. It must be emphasised that percentage purity, by itself, is certainly no criterion of whether a chemical is fine or not; it may be 99.9 per cent. and crude—if the 0.1 per cent, be arsenic contaminating a medicinal if the 0.1 per cent, be arsenic contaminating a medicinal chemical—or it may be about 80 per cent. and "pure" i.e., fine-if the remainder is water or some other neutral

and entirely inert diluent (e.g., potassium carbonate B.P.). Often it is really freedom from impurities which makes the Often it is really freedom from impurities which makes the chemical a fine chemical. A simple salt, such as ammonium chloride, may be practically chemically pure, and dirty—then it is not "fine"; but diamino-dihydroxy-arsenobenzene, even if dirty, would still be a fine chemical. Crude Epsom salts and magnesium sulphate puriss. B.P. do not differ greatly in percentage composition—that is, the difference is not great numerically, although it is great in importance. Barrium sulphate as sunplied to the paint trade might be Barium sulphate as supplied to the paint trade might be Barum sulphate as supplied to the paint trade might be very fairly pure—i.e., it might test well over 99 per cent. BaSO<sub>4</sub>, but yet be quite unsuitable for pharmaceutical use; for the latter purpose it has to be specially prepared as a fine chemical so as to be perfectly free from soluble barium salts. It may be that a chemical is manufactured by recognised makers of heavy chemical sona large scale and yet produced in a state of chemical purity of such a degree as produced in a state of chemical purity of such a degree as to warrant, other considerations apart, its being classed as a fine chemical. Owing to the large scale on which it is manufactured, the process has become so standardised that the comparatively unskilled labour of the process worker, under a chemist who merely supervises, suffices to run the plant; and here the conditions of manufacture are such that the chemical ceases to be "fine." Commercial sodium bicarbonate may be taken as an example.

Substances in the infancy of their utilisation may be fine chemicals, on account of the small scale on which they are manufactured, and later on may become heavy chemicals. To put it another way, when the manufacture of a particular chemical attains a scale larger than that usually associated with fine chemical manufacture, it may on the one hand remain a fine chemical, or on the other hand it may come to be regarded as a heavy chemical; this willdepend upon whether its manufacture and refinement do or do not require intensive and highly skilled attention on the part of trained chemists. For instance, on however large a scale they are manufactured, quinine, caffeine, saccharin, and vanillin remain fine chemicals; but if nickel sulphate came to be manufactured on the same scale as copper sulphate, or maltose on the same scale as cane sugar, then they would cease to be fine chemicals.

There is no doubt about the distinction between heavy and fine chemicals in the great majority of cases, but there are bound to be some difficult border-line cases, and here, in addition to the other attributes of scale of manufacture and skilled manufacture, the crux must be: Is the chemical of a

skilled manufacture, the crux must be: Is the chemical of a specified degree of purity to meet special purposes?

Take the case of dyes. The writer has stated elsewhere that "dyes constitute a group of fine chemicals so large and important that they are generally considered as a separate branch of chemical industry; actually, however, they cannot be thus divorced from the rest of the fine-chemical industry." Many dyes are produced on a large scale in a state of comparative impurity, and would therefore not be classed as fine chemicals; certain dyes are, however, made on a small scale by finechemical require. however, made on a small scale by fine-chemical manufac-turers in a state of purity for purposes other than that of dyeing in the ordinary sense, as, for instance, stains, indi-cators, and so forth: in such cases these substances, although dyes, are undoubtedly fine chemicals.

As the present writer has stated before (*ibid*), in dealing with the "Present Position of the Fine Chemical Industry," the first classification of chemicals is into the heavy and fine. Hence, to the question: "When is a chemical a 'fine' chemical?" we may reply: "When it is not a 'heavy' chemical."

Pope, in "Science and the Nation," states: "The pro-

ducts of the chemical industry as a whole may be divided roughly into two classes, heavy chemicals, which serve largely as raw materials in other branches of chemical industry, and fine chemicals, which consist mainly of finished products such as dyestuffs, drugs, photographic chemicals, and the like" and the like.

Then, after quoting Mr. Woolcock's definition (C. & D., November 19, p. 70), Mr. Hill continues:

We have to consider, then, these attributes of chemicals: Scale of manufacture; conditions of manufacture; skilled labour; highly skilled supervision; rarity; high cost; high grade of purity; and freedom from impurities. Each of these ideas contributes something to a general understanding of what fine chemicals are. We require, however, something more than a general understanding. Each is true of most fine chemicals but none alone suffices for the diffithing more than a general understanding. Each is true of most fine chemicals, but none alone suffices for the difficult cases. The one idea which does run right through, and may be said to be crucial, is the idea that the chemical is to be put to some specific use, and for that purpose must conform to some definite standard of purity. The shortest description of a fine chemical which is in any way adequate is that it is a chemical not produced as a "heavy" chemical, which is of specified purity for a specific purpose.

# Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

# 42 Cannon Street, E.C. 4, December 8

The political news being good this week, the feeling in regard to a return to normality is decidedly more optimistic, and when the month of January has passed many look for improved trading all round, as everywhere stocks in consumers' hands must be depleted. Meanwhile, home trade maintains its recent improvement, but orders are, of course, quite small and hand-to-mouth, in view of the approaching close of the year. Export trade continues depressed, and shows no signs of reviving as yet, while in the case of Germany the erratic movements of the mark completely dislocate business. Refined camphor is steady and unchanged, but there are practically no spot stocks. The fact that the menthol market is now "free" gives a much better tone to this product, as with the elimination of the import duty there is no need to make forced sales of c.i.f. parcels. Spot holders have advanced their prices 1s. to 2s. per 4b. from those at which business could have been done a week ago. Codliver oil is irregular, but prices for finest brands of Norwegian are well maintained. Senega is firm and in fair demand. Ergot, jalap, and cubebs are cheaper. Honey is steady, East Indian dill seed is dearer, and fenugreek is easier. Mercury is firm, and shellac for delivery is higher.

Higher	Firmer	Easier	Lower
Capsicums (Bombay) (Stronella oil Dill seed (Ginger (African) Menthol Potash caustic	Barium chloride (Continental) Blanc fixe Litharge Lithopone Palm oil Phenacetin Soya-bean oil Wormsecd oil	Amidopyrin Bergamot oil Betanaphthol Clove oil Cubebs Emetine salts Euonymin Fenugreek seed Lemon oil Phenol- phthalein Potash chlorate Sassafras oil Sodium nitrite Sulphonal Turmeric Vetivert oil Wood oil (Ch.)	Brucine and salts Calcium lactate Chloral hydrate Coconut oil (deod.) Ergot Hyoscine salts Hyoscyaminc Jalap Morphine salts Olive oil (Fr. cdible) Paraldehyde Sodium bromide

Cablegram

New York, December 6.—Business is quiet. Aspirin is dearer at 70c. per lb., and chloral hydrate has advanced to 85c. Mercury is also dearer at \$46.00 per flask. Wintergreen oil has declined to \$4.75, and round buchu to \$1.20 per lb. Oregon balsam of fir is lower at \$1.50 per American gallon.

Crude Drugs, etc.

Antimony.—There is no alteration in English regulus, which continues to sell in small lots chiefly for export. Foreign refined is very dull at about £24 10s., this being really a low figure compared with pre-war values; and, as production is now comparatively low, it is hardly possible to imagine that the prices can drop much further. Crude is still nominal at between £15 10s. to £17 per ton.

CAMPHOR (CRUDE) is unchanged at 3s. 11d. per lb. on the spot, and for December-January shipment 3s. 7½d. c.i.f. is quoted.

Camphor (Refined) is steady, with small sales of  $2\frac{1}{2}$ -lb. slabs at 5s. per lb., and for December-January shipment 3s. 10d. c.i.f. is quoted.

CASCARA SAGRADA.—Steady, but quiet, spot holders quoting 80s. to 82s. 6d. for two- to three-year-old bark and 70s. to 72s. 6d. for thin new crop on the spot.

Castorum.—The annual sale of the Hudson Bay Co. will be held on Wednesday, December 14, when about 2,500 lb. will be offered.

CHAMOMILES remain firm, and in the absence of adequate supplies of new Belgian, recourse has to be had to old crop, good pale of which can be had at from about 200s. to 215s. per cwt. as to quality.

Cop-Liver oil.—Our Bergen correspondent writes on December 3 that an increased demand, together with only small stocks on the market, suddenly caused an advance in the price from 95s. to 102s. per barrel c.i.f. London. It appears that the supplies in Norway are smaller than anticipated, and exports up to November 26 exceed the production this year.

CUBEBS are offered at the easier rate of from £17 10s. to £18 per cwt. for good oily blacks.

Ergor.—Good sound Russian now landing is offered at 4s. 9d. per lb. Spanish is easier at 4s. 6d. to 4s. 9d., and Portuguese at 4s. 6d. per lb.

Gamboge is unchanged, with good bright Siam pipe offering at £30 and partly broken and blocky pipe at £28 per cwt.

Hen yolk is lower. Chinese hen liquid 2 per cent. spot is quoted at 100s. per cwt. for prime afloat, and for April-June shipment 67s. 6d. c.i.f. has been paid. Dried whole native on the spot is  $2\frac{1}{2}d$ , and sprayed 6d. Dried yolk spot is  $3\frac{1}{2}d$ . Hen albumen on the spot is 2s. 11d. for prime, and for December-January shipment 2s. 9d. per lb. c.i.f. is value.

Honey is in steady demand at unchanged rates, with a scarcity of good white qualities. Amber-set Jamaica can be had at 47s. 6d., and ordinary at 42s. 6d. Dull yellow-set Chilian is 42s. 6d., and ordinary Honolulu 37s. 6d. Australian is firm at 37s. 6d. for good pale set

HYDRASTIS is steady on spot at from 21s. to 21s. 6d. per lb. net.

JALAP is cheaper; good heavy Vera Cruz (12 per cent.) offering at 1s. 6d. to 1s. 7d. per lb., and 1s. 1d. for 7 to 8 per cent.

MENTHOL.—The fact that the menthol market is once again "free" of import duty has had the unexpected result of advancing spot prices 1s. to 1s. 6d. per lb. Last week spot business could have been done at 19s. 6d. per lb. for Kobayashi-Suzuki, but 21s. has since been paid, and on Wednesday afternoon 21s. 6d. was the lowest. For shipment, December-January is quoted at 18s. 6d. c.i.f. Affoat has been sold at 19s. 3d. c.i.f.

Mercury.—The tone is very steady, although there is no special feature. The chief importers of Spanish maintain their price at £10 10s. per bottle, and outside sellers, chiefly of Italian, ask £10 5s. to £10 7s. 6d. Export business is not active, and the home demand is restricted, there being no robust feeling of confidence in the stability of the market. The tone in the United States is reported firmer, due to an improved domestic demand, despite the recent arrival of another consignment from Italy of about 800 bottles.

OPIUM.—A Constantinople advice, dated November 24, states that the sales of opium on that market during November amount to between 70 to 80 cases, mostly for speculators. Prices have eased and exports are at a standstill. The fear of a further depreciation of paper money destroys, all business. Holders of opium remain expectant and decide not to reduce their stock. It is presumed that this unsettled situation will persist for a long time, and will not be modified before order is established in Turkey and Anatolia.

SENEGA remains steady with a fair demand at 4s. 3d. per lb. on the spot. A New York mail advice reports an increased demand for export, causing the price to stiffen to 72c. to 75c.

SHELLAC.—The unsettled and more subdued state of the market is almost entirely due to the weakness of the rupee exchange and the consequently lower cost of import, but the statistical position is strong, as shown by the big reduction in the London warehouse stocks last month. The last returns amounted to only about 7,140

cases, and a still lower record is apprehended for the end of the year due to the small "afloats" to this side. Spot market is steady at 340s. per cwt. for usual standard TN Orange quality; fine second Orange is 375s. to 380s.; superfine, 400s.; AC cakey, 290s.; GAL, 275s.; and IC, 230s. Futures are higher, the sales including December at 305s. to 335s., and March at 280s. to 312s. 6d. to 305s.

TURMERIC is easier with small inquiry only, fair bright Madras finger offering at 22s. 6d. per cwt., and Bengal

Seeds and Spices

Capsicums.—Bombay are 5s. per cwt. higher at 52s. 6d. per cwt. for red partly off stalk.

CHILLIES continue scarce, and small sales of fairly good have been made at close upon 200s. per cwt. Some bright Mombasas have also been sold at 190s.

CLOVES are inactive, with spot sellers of fair Zanzibar at 1s.  $6\frac{1}{2}$ d. per lb., and December-February shipment at 1s. 4d. c.i.f.

GINGER remains firm for all descriptions; market business is small, but there is a steady demand for consumption. Jamaica is firm at 200s. per cwt. for good sound, and 185s. for slightly wormy. African has been in fair demand for the United States, and up to 40s. is asked for sound in Liverpool. Cochin washed rough is 70s. to 75s., and wormy 55s. to 60s.; Calicut is 60s.—all spot.

Nutmegs.—Singapore and Penang are in fair demand at steady prices. West Indian have also sold more freely

at a slight advance on the previous auction.

PEPPER has been quiet. On the spot fair black Singapore has been sold at 3,76d to 3,2d, which is a trifle easier. December-February and January-March shipments have sellers at 3,6d, per lb. c.i.f. Lampong is 4,4d, Tellicherry 4,4d, and Aleppy 4d, on the spot. White pepper closes steady, fair Muntok offering at 74d. per lb. on the spot; to arrive, December-February and January-March shipments have buyers at 74d. c.i.f. White Singapore is 71d. on the spot, and the value of November-January shipment is 7 d. c.i.f.

PIMENTO is easier, with spot sales at 2 d. per lb.

SEEDS .- Business continues quiet, the following being spot quotations: Anise is unchanged: Spanish, 72s. 6d.; Russian, 71s. per cwt. Canary seed.—Spanish, 12s. od.; Tangier, good, 87s. 6d.; Mazagan, 82s. 6d.; Larache, 70s.; for good quality; La Plata, 50s. to 70s. as to quality. Caraway seed.—Dutch, 32s. 6d. for prime; Morocco is 25s. per cwt. Coriander seed.—Sound, 28s. 6d.; sound clickly matty. 25s. program: 14s. to 18s. Cory. slightly musty, 25s.; wormy, 14s. to 19s. Cumin seed is steady at 52s. 6d. for fair quality and 40s, for slightly dusty. DILL SEED.—East Indian is now quoted at 28s. per cwt. Fennel seed.—40s, per cwt. in Liverpool. Fennel seed.—40s. GREEK SEED.—10s. to 11s. per cwt., as to quality, on the spot. Hemp seed is unchanged at 21s. per cwt. for Manchurian on the spot. Linseed.—Morocco, 24s. 6d. per cwt. Mustard seed.—Good English yellow, 35s. per

Essential Oils

With the exception of citronella oil, which bas been in fairly active demand and is dearer, changes this week appear to be comparatively unimportant. Bergamot and orange do not show much alteration, but lemon, on the spot, is being offered at lower prices in some directions. Sassafras oil is again easier. Wormseed oil is firmer in the States. Quotations for aromatic and synthetic chemicals are extremely variable, and this is as to the fact that some holders have stocks imported before the "Safeguarding" Act came into force.

Anise (Star).—"Red Ship" on the spot is nominal at 2s. 2d. per lb. November-December shipment is quoted 2s. 3d. c.i.f. probably due to fluctuations in rates of exchange as well

Bergamor.—For January-February shipment 20s. 6d. to 21s. 6d. per lb. c.i.f. is quoted for 37 to 39 l.a. according to seller, which is a shade easier. Spot is from 22s. to 23s.

CAMPHOR.—Spot is quoted at 125s. per cwt. for cases

of Japanese white, essential.

CARAWAY.—For Dutch rectified 7s. to 7s. 6d. per lb. is the spot quotation. There are cheaper re-sellers.

Cassia on the spot is unchanged for 80 to 85 c.a. at 4s. 6d. per lb.

CINNAMON.—Ceylon leaf is quoted at  $5\frac{1}{2}$ d. per oz. spot. For high-testing oil 9s. 6d. per lb. spot or c.i.f. is the price. Arrivals totalling 129 cases from Ceylon have announced this week.

CLOVE.—Spot quotations are easier at 11s. 3d. to 11s. 9d.

per lb., according to seller.

CITRONELLA OILS appear to have been in active demand, and are dearer. For Ceylon on the spot 1s. 53d. has been paid, and 1s. 6d. is now quoted, supplies being small. Estate oil is also scarce, and spot holders are not quoting under 1s. 7d. to 1s. 7½d. Burmese has been selling at advanced rates, both for spot and c.i.f., at from 2s. 10d. to 3s. Holders of Java ask about 2s. 11d. to 3s. for spot and c.i.f. to arrive.

CORIANDER.—Some holders have advanced their spot

price to 40s. per lb.

Lemon on the spot is easier at from 2s. 10d. to 3s. per lb., but offers are being made below this in some directions. The price to come forward is from 2s. 8d. to 2s. 11d. c.i.f.

PALERMO, December 2.—The position remains generally unchanged, the demand being small, and holders who are compelled to sell have to listen to bids. The new pressings have scarcely begun, and it seems that December oil, which used to be the speciality of some districts, will be almost looking this seems. lacking this season.

Lemongrass.—Cochin is quiet at 3½d. to 3½d. per oz., according to quality, for spot. Importers quote 23d. to

3d. c.i.f.

Lime.—West Indian is unchanged for distilled at from 2s. 3d. to 2s.  $4\frac{1}{2}$ d, per lb. on the spot.

MINT.—Japanese dementholised Kobayashi-Suzuki is quoted unchanged at 4s. 71d. per lb. spot and 4s. 5d. c.i.f. to arrive.

Orange.—For Sicilian sweet 13s. to 13s. 6d. per lb. and upwards is quoted on the spot, according to holder, and to come forward quotations range from 12s. 9d. to 15s. 6d. c.i.f. West Indian sweet is 10s. to 11s. per lb. for spot. For forward shipment 9s. to 10s. c.i.f. is quoted.

PALERMO, December 2.—Demand from consuming places is quiet. The production so far has been limited, and the present outlook is that the total of the pressings will be below normal this year.

PATCHOULI.—Penang is scarce on the spot, holders quoting variously at from 42s. 6d. to 46s. per lb., according to quality. The price to come forward is 40s. c.i.f. There are sellers of Japanese at 42s. spot.

PEPPERMINT.—American tin oil is unchanged at about 10s. 3d. to 10s. 6d. per lb. spot and to come forward at

9s. to 9s. 6d., according to seller.

Sassafras is cheaper on the spot at 7s. to 7s. 3d. per lb. Vetivert.—Bourbon on the spot is easier at from 18s. per lb. for original packages to 20s. for smaller quantities.

Wormseed.—Reports from U.S. state that still higher prices are anticipated, and c.i.f. quotations are made at 22s. 3d. per lb. On the spot some holders are quoting 22s.

Aromatic and Synthetic Chemicals, etc.

AMYL SALICYLATE is 4s. to 4s. 6d. per lb. AUBEPINE has a large range of prices, of which 12s. to 18s. per lb. is a fair average, according to quality. Some holders can sell under this. Benzyl acetate is 3s. to 3s. 6d., and Benzyl benzoate 3s. 6d. to 3s. 9d. Bromstyrol ranges from 11s. to 15s., as to seller. Cinnamic aldehyde is quoted from 7s. 6d. to 12s. 6d. per lb., according to quality. Citronellol is quoted at 40s. to 45s. ex Bourbon geranium, and 30s. from Java citronella. Coumarin is offered at 10s. to 11s. per lb. Diphenyl oxide is 5s. per lb. EUGENOL is quoted 13s. 6d. to 15s., and Iso-EUGENOL at 22s. 6d. to 25s. Heliotropine has been reduced to 6s. 6d. per lb. in one direction; from 8s. to 10s. is the general figure. METHYL ANTHRANILATE is offered variously at 7s. to 10s. per lb. Methyl salicylate is quoted at 2s. 6d.; ton lots at 2s. 4d. Musks.—xylol is quoted at 13s. to 13s. 6d., ketone at 50s., and ambrette at 85s. to 100s. Phenyl ethyl alcohol is 20s.

to 23s. for French and 17s. to 20s. for undescribed. SAFROL is unchanged at 3s. 3d. to 3s. 6d. TERPLINEOL.—French or other make is obtainable at 2s. to 2s. 6d. VANILLIN.—There is a seller at about 38s. 6d. for quantity; otherwise prices are quoted up to 41s. The above prices are all for spot.

#### Fixed Oils, etc.

THERE has not been quite such a marked decline in values in this market during the past week, although business In this market during the past week, although business has shown little, if any, improvement. Linseed oil and turpentine are still the best features. ACID OILS.—This market has been quiet, and prices are quoted at about same level. Coconut, 34s.; palm-kernel, 33s. 6d.; and groundnut, 31s. Castor oil remains on the quiet side with prices maintained. Pharmaceutical, 60s.; first pressings, 55s.; and second pressings, 50s. Coconut oil has been quiet throughout, and is easier for deadorised. has been quiet throughout, and is easier for deodorised at 52s. 6d. Ceylon at 45s. and Cochin at 55s. are unchanged. Cottonseed oil.—A quiet week has again been experienced, and prices close on the easy side at: Deodorised, 45s.; common edible, 43s.; soapmaking, 42s.; and crude, 38s. GROUNDNUT OIL remains slack, but prices are so far maintained. Deodorised, 55s.; crude oriental, 48s. c.i.f. for shipment. Linseed oil.—The trade demand in this country has become more active this week, and current prices being considered reasonable, a little more confidence is apparent under the renewed hardening in seed prices. Linoleum manufacturers are still slack, the development of this industry being held up until the reduction in the cost of living has proceeded further. The fact is worth noting that crushers are not very eager sellers, and the terms quoted for forward delivery are fully up to the price of spot oil. Naked on spot closes at 29s.; December, 28s. 6d.; January-April, 28s. 3d. to 28s. 6d.; May-August, 28s. 6d. Hull naked spot 28s. per cwt. OLIVE OIL.—Finest French edible in casks is quoted 10s. per gallon c.i.f. for prompt shipment, in cases at 1s. per gallon extra. Palm-kernel oil seems steadier, with last week's prices still obtaining. Deodorised 47s. 6d., and crude 43s. Palm oil has had a much better week, and at the close prices were slightly higher and the market firmer. Lagos, 37s.; softs, 34s.; hards, 31s. 9d. Rape oil remains slack with values unchanged at : refined, 56s.; crude, 50s. Soya-bean oil.—A revival of activity has taken place after a long period of stagnation, and at the close prices were a point higher. Deodorised, 46s.; crude Oriental c.i.f. for shipment. 37s. Turpentine—Indications have been rather in the direction of an increased trade demand, but dealers do not seem keen in entering into large engagements for a while, in view of the recent sharp advance in the American rate of exchange and the idea that this feature will become accentuated and thus enable them to secure new importations more cheaply. The London warehouse stocks, in the meantime, have been steadily encroached upon, being now down to nearly 13,000 barrels. This reserve is not very large, as given a general improve-ment, in trade within the next few months shipments from America will eventually be resorted to on a larger scale. Holders of spot spirit in the Northern markets were recently asking up to over 71s. per cwt., and in London the market closed at 70s. per cwt., and January-April at 69s. 9d. Wood on is flat, Hankow closing at £66 10s. in barrels on spot, and £65 10s. for shipment.

#### Pharmaceutical Chemicals, etc.

PRICES are still much below what they should be in view of the firming up of quotations from Continental manufacturers. This is due to a large extent to the fact that large quantities were rushed into this country to evade the Key Industries duty. The holders of these stocks are not receiving the orders they expected, and not a few are now being forced to sell out at the best price obtainable. Hence the continual weakness of the market. However, such a position must come to an end and firmer prices will then follows. must come to an end, and firmer prices will then follow. Among the products which have been reduced in value are amidopyrin, betanaphthol, sodium bromide, calcium lactate, chloral hydrate, hexamine, paraldehyde, phenolphthalein, morphine salts, and sulphonal.

ACETANILIDE remains dull, with stocks offering at from

AMIDOPYRIN is weaker again, with some offers as low as 18s.; others go up to 22s. per lb. Sales are few. ASPIRIN is in fair demand at from 2s. 10d to 3s.

per lb., but small isolated lots are going cheaper. Continental makers are asking higher prices than the fore-

ATROPINE SULPHATE is steady but not active at 18s, to 19s. per oz.

BARBITONE finds very little demand, and prices are maintained with difficulty at 12s. to 12s. 6d. per lb.

Benzaldehyde (.03) is brighter, and some holders are asking 4s. per lb.

BENZONAPHTHOL is unchanged at 5s. 6d per lb., with

the market dull. BETANAPHTHOL has eased off, and is now quoted at 3s.

per lb. on a slack market. Bromides.—These products still find but few buyers, and prices are not by any means steady. Ammonium is about 11d. per lb. Potassium, crystals and granular, 8½d. to 9d. per lb. Sodium is easier at 10d.

Brucine.—Makers' list prices have been reduced 5d. to 6d. per oz. Crystals are now quoted at 2s.; hydrochloride, nitrate, and sulphate are all 1s. 10d. per oz. net.

CALCIUM LACTATE is now down to 2s. to 2s. 3d. per lb.,

and is still quiet.

CHLORAL HYDRATE is cheaper this week at about 5s. per lb.; good stocks are offering, with small demand.

CREAM OF TARTAR is steady and unchanged at 122s. 6d. per cwt. for 99 to 100 per cent. powder.

CREOSOTE, B.P., is unchanged and slack at from 3s. 9d. to 4s. per lb.

CREOSOTE CARBONATE is still unsteady at 13s. to 14s. per lb.; demand is poor.

EMETINE SALTS are slightly easier. Makers offer alkaloid at 3s. 9d., hydrobromide at 2s. 3d., and hydrochloride at

2s. 4d. per gram.

ETHERS.—The reduction of 2d. per lb. last week referred to ethers made from methylated spirit, makers' prices in Winchesters being as follows: s.g., 0.750, 1s. 6d.; 0.730 and 0.735, 1s. 6½d.; 0.725, 1s. 8½d.; 0.725 (triply rect.), 2s. 1d.; 0.720, 1s. 9½d.; 0.717, 2s. 1½d.; 0.720 (purif. from meth. spirit), 2s. 3½d. per lb. net. Euonymin.—Both green and brown are easier, makers

offering at 22s. per lb.

GUATACOL CARBONATE remains slack, with values unchanged at 12s. to 12s. 6d. per lb.

HEXAMINE can be had at from 3s. 6d. to 4s. per lb.,

but there is still very little buying.

Hydroquinone is steady at 4s. 3d. per lb., but the market is idle.

Hyoscine salts.—Makers' list prices show a reduction of 9d. per 15 grains, current prices for either hydro-bromide or hydrochloride being 2s. 3d. per 15 grains. HYOSCYAMINE SALTS have been reduced 1s. per 15 grains.

Alkaloidal crystals, hydrobromide, hydrochloride, and sulphate are now 2s. 6d. per 15 grains.

METHYL SULPHONAL has steadied at the lower figure

Milk-sugar.—Sellers still quote 150s. per cwt., but the market is unsettled in view of the forthcoming

the market is unsettled in view of the forthcoming appeal against the import duty.

MORPHINE.—Makers' list prices show a reduction of from 9d. to 11d. per oz. Alkaloidal crystals are now 11s. 10d.; precipitated 11s. 7d.; morphine acetate 9s. 3d.; bromide 11s. 7d.; hydrochloride 9s. 3d., crystals 9s. 6d.; meconate 11s. 7d.; sulphate 9s. 3d., crystals, 9s. 6d.; neutral tartrate, 11s. 7d. per oz. Morphine diacetyl is 1s. per oz. lower at 15s. 6d., morphine diacetyl hydrochloride is 14s. 6d., and morphine ethyl hydrochloride is 16s. 6d. per oz. net. ethyl hydrochloride is 16s. 6d. per oz. net.

PARAFORMALDEHYDE is unchanged and quiet at 3s. 6d. per 1b.

PARALDEHYDE is much easier, with some offers down to 1s. 9d. per lb.

PHENACETIN seems a shade firmer this week, and very little is now offering below 6s. per lb.

PHENAZONE continues steady at 7s. 9d. to 8s. per lb., with some offers below these figures.

PHENOLPHTHALEIN is a point down on the week at from 3s 6d. to 3s. 9d. per lb.

PIPERAZINE is steady but dull at 4s. per oz.

Potassium iodide.—The exports from Japan during August amounted to 1,147 kin, valued at 7,271 yen. During the eight months ended August 31 they were as

				TOTO	1020		
Kin			***	69,946	13,84	1 13.0	194
Yen	***			452,103	118,09	6 86,6	55
	****						
Of cru	de iodi	ne, 2	46 kir	ı, valued	l at 2,04	5 yen, wa	as ex-
ported	during	g Áug	gust, a	and the	exports	for the	eight
months	ended	Angi	ist 31	were:			

16,126 1921 1920 Kin 11,763 8,808 108,190 80,606 53,296 ••• ... ...

POTASSIUM PERMANGANATE is still called for fairly well, and quoted at from Tod. to 11d. per lb.

RESORGIN remains neglected at 8s. to 8s. 3d. per lb. for

B.P. quality.

SALICYLATES .- Sodium salicylate remains on the quiet side, but values seem to be a little firmer: Powder is 2s. to 2s. 1d., crystals 2s. 2d. to 2s. 3d. per lb. Salicylic acid is perhaps a shade easier at 1s. 5d. to 1s. 6d. per lb.

Santonin is very steady, with values well maintained

at £79 10s. to £80 per kilo., and less for quantities.

Silver nitrate.—The price of crystals on December 7 was based on a metal price of 364d. per oz., as follows: In quantities of 25 oz., 2s.  $3\frac{5}{8}$ d. per oz.; 50 oz., 2s.  $3\frac{1}{8}$ d.; 100 oz., 2s. 2\frac{1}{5}d.; 250 oz., 2s. 2\frac{1}{6}d.; 500 oz., 2s. 1\frac{1}{5}d. SODIUM BENZOATE is unchanged, but not at all active, at

2s. per lb.

SODIUM DIETHYLBARBITURATE remains uncalled for, with values quoted unchanged at 22s. 6d. per lb.

Sulphonal again this week is a point down, being offered

at 17s. to 18s. per lb.

TANNIC ACID.—Leviss is steady but not active at 5s. per lb. TERPENE HYDRATE is unchanged and slack at 3s. 6d.

per lb. THYMOL is neglected, and nominal at 22s. per lb.

#### Heavy Chemicals

London: December 7.

DEPRESSION continues to govern this market, and buyers are still hard to find. Values, however, are fairly well maintained, probably on account of the much higher prices now being quoted by Continental makers for forward delivery. Supplies of most products are rather limited on the spot.

ACETIC ACID has been in light demand, and values remain steady at 80 per cent. pure £43 and 98 per cent.

glacial at about £50 per ton.

ACETONE remains neglected and weak at £80 per ton

Alum continues slow, with Continental offering at £12 10s. per ton on spot. British is at about £16.

Arsenic appears to be quite lifeless, but the Cornish mines maintain their attitude of indifference with the belief presumably that they will eventually find buyers on their own terms owing to the reduced output. Firsthand quotations for Cornish are anything between £40 and £42 10s. per ton delivered London. Offers from abroad would seem to be fewer than they were recently, and no reliable quotation is obtainable in that direction.

BARIUM CHLORIDE (98 to 100 per cent).—British is unchanged at £14 10s. Continental makes on spot are

limited and firmer at about £13 per ton.

Barytes is quoted at £4 10s. per ton up to £6 10s. according to quality. There has been a moderate demand. BLANC FIXE is quoted a point higher at £22 10s. per

ton, with a steady but limited demand.

Borax on spot is now offered at : Commercial, crystals, £30; powder, £31; B.P. crystals, £35; powdered, £36 per ton; market is dull.

Bonic acid from makers and on spot is: Commercial crystals, £65; powdered, £67; B.P. crystals, £75; powdered, £79 per ton.

COPPER SULPHATE. There is not much sign of any improvement in export demand, although a few more inquiries have come forward for limited quantities. The tendency, however, is rather firmer, there being eagerness to sell except on better terms, due to the development of greater firmness in rough bar copper. Italy is again inquiring for the latter, and her competition on the Continent continues keen for sulphate orders. Export terms now range from £29 to £30 per ton, less 5 per cent. for casks, f.o.b. Liverpool. Slightly more demand is reported for home use.

EPSOM SALT remains unwanted, with offers still at

£8 10s. per ton in bags f.o.b.

FORMALDEHYDE is still slack and unsteady at about £80 to £84 per ton.

GLAUBER'S SALT is entirely neglected and quoted at £5 per ton in bags.

LEAD ACETATE is not in demand; a few spot lots are quoted at £36 for brown broken and at £43 per ton for white crystals.

LITHARGE from English makers is steady at £37 per ton. Imported material is a shade firmer at £34 10s., and is in little demand.

LITHOPONE is much steadier, and quotations for 30 per cent. Continental red seal are up to £24 10s. per ton.

OXALIC ACID is unchanged, but still slack at 81d. per lb. Potash caustic from British makers is steady at £32 per ton; spot parcels have advanced up to £33 to £34 per ton on account of higher quotations from Continent.
POTASSIUM BICHROMATE is unchanged at 73d. per lb.

from makers, and spot parcels are maintained at about

8d. per lb.; demand is light.

Potassium carbonate remains steady at last week's cheaper figures of from £25 to £26 per ton for 90 to

Potassium chlorate is weaker on spot at 6d. per lb.;

same figure quoted by makers; market is quiet.

Potassium prussiate from makers is now quoted at: Red, 2s.; yellow, 1s. 1d. per lb.; spot lots of yellow are offered at about 1s. 2d. per lb. There is occasional demand

Soda ash (58 per cent. light alkali) is steady, but the market is not at all active. Spot lots, London, are £10 per ton. North, about £9. Makers are quoting at per ton. £8 7s. 6d. for home trade only, and at about £10 5s. for export.

Soda Crystals are steady at the previous figure of £7

per ton in bags, carriage paid.

SODIUM BICARBONATE on the spot is unwanted, and

refined material is weak at £11 per ton.

Sodium bichromate on the spot is at about 63d. per Ib. for English. Home makers are quoting at 61d., and American material at about same figure.

SODIUM CAUSTIC has not been in much demand during the past week, and prices are unchanged. Spot lots: 70 to 72 per cent., £24 10s., and 76 to 77 per cent., £26 10s. to £27. Makers are quoting for home trade only at: 70 to 72 per cent., £24 10s.; 76 to 77 per cent., £26 18s. pen to: £26 15s. per ton.

SODIUM CHLORATE from makers and spot parcels is

about 33d. per lb.; some limited inquiries only.

Sodium hyposulphite.—Pea crystals have dropped off in demand altogether, and are unsteady at £20 per ton on spot; commercial is weak at £15. Makers are quoting £20 for photographic and £13 for commercial.

SODIUM NITRATE is steady at £14 15s. per ton for 96 per

cent. refined.

Sodium nitrite is easier at about £37 per ton for 100

Sodium prussiate on the spot is firm at 84d. per lb.; makers are quoting at about 8d. per lb. There has been some limited inquiries.

SODIUM SULPHIDE (60 to 65 per cent.) concentrated in casks from makers is steady at £23 per ton; market is very quiet.

ZINC OXIDES .- British makers quote unchanged at: white seal, £41 10s.; green seal, £40; red seal, £37

per ton, all f.o.r. makers' works.

COAL-TAR PRODUCTS, ETC.—This market is now fairly steady, and this week, although business has been rather slow, values are well maintained. Anhline oil and salt are unchanged at 1s. 4d. per lb.; market is dull. Beta-

NAPHTHOL is inclined to be weak at 3s. 9d. per lb. in casks, free. Benzol is steady, with limited demand. Pure is 3s. 2d. and 90's 2s. 9d. per gallon in drums. BURNING OIL is unchanged and steady at-Crude, No. 3, 81d.; No. 2, 8d. per gallon, barrels free; business is CREOSOTE OIL remains dull, and tends in buyers' favour at 9d. per gallon, barrels free. Carbolic-ACID CRYSTALS remain very weak on a dull market at ACID CRYSTAIS remain very weak on a dull market at about 6½d. per lb. CRESYLIC ACID is neglected; values are being maintained at—Crude, 1s. 10d.; and pale straw, 2s, 6d. per gallon, drums extra. NAPHTHALINE is unchanged for all grades, but the market is very much on the quiet side. Crude, £7 to £9; powder, £17; crystals, £18 10s.; flakes, £19; candles and tablets, £40 per ton. Solvent naphthas.—Some fair business has been done recently at (90 to 160) 2s. 10d. to 2s. 11d. and (90 to 190) 2s. 8d. to 2s. 9d. per gallon in drums. Toluol and Xylon are nominal. Refined tar is now quoted at 30s. to 35s. per barrel f.o.r. Crude tar is unchanged at 45s. to 50s. per ton ex works. Sculphate OF AMMONIA for export is quoted round about £16 10s. per ton.

German Drug and Chemical Markets

"WHEN the curtain falls upon the theatrical show in Wash-"When the curtain falls upon the theatrical show in Washington the world will learn that no ploughshares have been manufactured from machine guns, and matters will remain as they were," is the introductory remark to the market report of a leading Hamburg wholesale drug-house, dated December i. "The careful observer will have noticed that the stock market no longer quotes such high prices as hitherto. Possibly it has now dawned upon many a speculator that his chare in some mine will not increase hit hitherto. Possibly it has now dawned upon many a speculator that his share in some mine will not increase his income, earned without working for it, if the machinery of the State threatens to break down. The exchange rates have also declined; only the prices for commodities continue to soar to unattainable heights, and the hungry middle-class is compelled to disburse its savings in order to satisfy the cravings of the stomach. This state of tension comprehe caution. It dealing with goods the situation property of the stomach. to satisfy the cravings of the stomach. This state of tension compels caution. In dealing with goods the situation may arise whereby producer and consumer cannot meet, the former owing to increased cost of production, and the latter in consequence of diminished purchasing power. This would entail a business paralysis with all its sequels—reduction in prices, granting of credit, losses, dismissal of workmen, strikes, riots, etc., particularly since the buying up of German goods' has been in operation for several months, and regular business will be superseded by the sale of hoarded stocks. When nations lose contact with each other diplomatic and economic relations usually cease, and when no agreement can be reached between debtor and and when no agreement can be reached between debtor and creditor a catastrophe occurs. In politics and in the world and when no agreement can be reached between debtor and creditor a catastrophic occurs. In politics and in the world of trade events repeat themselves, as history teaches us, like the tides, and Nature imposes certain limitations which cannot be overcome by political means. Therefore it would appear as if the present state of unlimited possibilities of nonsense, ruin, and misery is about to unite at least those nations with sound sense and business experience in the recognition that things cannot be allowed to go on as hitherto. 'Something' must be done, even should the step taken be unproductive of any practical result in the end, like so many other things which have been done. It is now out of the question to allow matters to take their own course and to await events if Germany is not, in dying, to drag its grave-diggers with it into its grave. All attempts to remedy matters will, however, prove abortive unless steps are taken to ensure the application of the only radical remedy—viz., the conclusion of a real peace in a really reconstructed Europe." Business is brisk, and the following quotations are given in marks per kilo.: / ACETIC ACID.—Glacial (98 to 100 per cent.) m.24; for export m.36; 80 per cent. m.20; for export m.35.

Ammonium chloride.—White 98 to 100 per cent. spot stocks are offered at m.28 for the home market; for export quoted only in foreign currency.

quoted only in foreign currency.

BALSAM PERU.—Genuine original has advanced to m.900 place in Ph.G.V. at m.250.

Benzaldehyde—Spot stocks are almost cleared. Small amounts are officred at m.70; for delivery towards the end

amounts are offered at m.70; for delivery towards the end of December at m.60.

BENZOIC ACID and SODIUM BENZOATE have advanced to m.60 for home and export.

CAFFEINE (FURE).—M.1.400 for Germany; for export m.1.600. The sales have increased since the price advanced. Caffeine salts have advanced to m.550, whereupon more business has been done.

CEVADILLA SEED has changed hands at m.45.

CHAMOMILES.—New crop at m.60, prime 1920 harvest at m.50, ordinary quality m.30. These prices are below those quoted in the countries of production, and new purchases will have to be made at higher cost price.

CITRIC ACID.—Prices have again advanced; offered cheap at m.250 for home and export.

COMMARN has advanced to m.950, and is in brisk demand.
CREAM OF TARTAR (98 to 100 per cent.) is now scarce, and
fetches m.100 for home consumption; for export can only GLYCERIN.—Manufacturers have again advanced their prices. Offered cheaply at m.95; for export m.100.

HELIOTROPINE has recently been in demand at m.750.

MENTHOL.—Spot is offered at m.2,500 and broken bulk at

MENTHOL.—Spot is offered at m.2,500 and broken bulk at m.2,700, recryst. at m.3,000.

MILK SUGAR is in large demand, particularly for abroad. Orders for export can be quoted only in foreign currency. Salicylic acid.—All available stocks have been cleared, and is now quoted at m.80; for export m.95.

SODIUM SALICYLATE has advanced to m.120.

TARTARIC ACID is now very scarce, especially spot stocks. Large orders have been placed by foreigners, and manufacturers are only able to offer stocks from contracted deliveries at prices for Germany based on foreign currency. Offered at m.110 for powder and granular, m.120 for crystals; for export m.5 per kilo. more.

VANILLIN.—Increasing prices for cloves have led to repeated advances in price. Offered at the favourable price of m.4,000 for home and export.

Seychelles Cinnamon Leaf Oil

A GOVERNMENT report on the trade of Scychelles for the year 1920 states that a remarkable increase took place in the year 1920 states that a remarkable increase took place in the production of essential oil from cinnamon leaves, the price of which was high on the London market. No less than 39,500 litres were produced last year, compared with 24,400 litres in 1919, and the relatively small quantity of 12,700 litres in 1918. The value of the essential oil exported in 1920 was Rs. 3,90,000, or about Rs. 10 per litre. The price of this commodity has fallen to about Rs. 3 to Rs. 4 per litre, and consequently little is now being manufactured, so that the exports for 1921 will show at decline.

Chinese Opium Cultivation

A BLUE BOOK (price 5s.) has been issued containing corre-A BLUE BOOK (price 5s.) has been issued containing correspondence respecting the cultivation of opium in China, and recording protests to the Chinese Government against the widespread recrudescence of poppy cultivation in various parts of the country. Sir B. Alston, British Minister in Peking, in a note to the Chinese Government, says:

"It has been my painful duty to report the conditions to my Government, and I am instructed to state that they are It has been my painful duty to report the conditions to my Government, and I am instructed to state that they are indignant to learn of the gross bad faith displayed by the Government and people of China, who are guilty of direct and flagrant breach of their solemn treaty obligations to Great Britain in this matter." Lord Curzon in one passage indicates "that this lapse from good faith will not be allowed to pass unnoticed by the League of Nations!"

French Proprietaries

M. PAUL FUMOUZE has contributed an article on "Pharmaccutical Proprietaries and the Commercial Crisis" to the "Exportateur Français." He states that during 1920 foreign orders were received on an unprecedented scale by foreign orders were received on an unprecedented scale by French firms, the rate of exchange giving buyers an inducement to purchase in France rather than in Great Britain or the United States. In fact, it was difficult to cope with the orders, as the crisis of transport handicapped delivery of the raw materials, etc. From the Armistice until late last year export orders poured in. Some foreign buyers, to guarantee themselves in case the franc should rise in value sent a cheque with each order, and also possed orders. to guarantee themselves in case the franc should rise in value, sent a cheque with each order, and also passed orders for quantities much in excess of their current needs. This overstocking, as well as the bad state of trade in many foreign countries, made 1921 commerce less satisfactory. The best buyers of French proprietaries are the Argentine, Brazil, Canada, Cuba, Italy, Mexico, Spain, Uruguay, and the United States (before the war, one might have added Russia). Now Cuba suffers from the effects of speculation in sugar; the Argentine has financial troubles; Brazil and Italy find the franc too high; Canada and Spain have raised their Customs tariffs, and in the United States "the restrictions as to the editing of pamphlets and advertiserestrictions as to the editing of pamphlets and advertise-ments handicap the extension" of the sale of French pro-prietaries. M. Fumonze remarks that there is a general tendency to multiply formalities and increase Customs duties on remedies, and even if French firms decide to manufac-ture abroad (as some did a few years before the war), they find their action entails new formalities and new taxes. He suggests the French Government should watch over the export interest, and, if necessary, adopt retaliative measures.



Letters for this section should be written on one side of the paper only.

The writer m y adopt an assumed name for purposes of publication, but he must in all cases furnish his real name and address to the Editor.

#### Water-stills

SIR,-We have noticed in THE CHEMIST AND DRUGGIST for the past three weeks a correspondence about small water-stills, and two of your readers have stated that the results are disappointing. We think that we can claim to have sold more small water-stills than any other firm in this country, because for very many years past we have supplied the Stokes gas-heated automatic water-still. We claim half a gallon per hour as the output for this still, and we are prepared to guarantee this output. Your correspondent (C. & D.), December 3, p. 71) seems to think that it is necessary to have commodious premiscs, but the Stokes automatic water-still is a small piece of apparatus which just hangs up on a bracket on the wall and takes up practically no space at all. It is obviously not the Stokes automatic water-stills that your correspondents have been referring to. Yours very truly,

Liverpool.

THOMPSON & CAPPER, LTD.

Aspirin Tablets

SIR,—The remarks by J. Haddock (C. & D., December 3, p. 70) anent the aspirin-tablet case recently before the courts must be of interest to many. It is a pity he does not supply some evidence in support of such bold statements. So far as I know, there is no literature to support his claim. I am quite certain that, if it is true, our friend is hiding his light under a bushel, and should either come forward and make a useful contribution to pharmaceutical science or exploit it commercially. Perhaps he has in mind a patent (No. 132,294) in the name of Pickard, J. A., Rankin, I. G., and Pickard, Ive & Rankin. This patent claims that aspirin tablets made of starch, with the addition of a binding agent such as rosin or gum damar dissolved in a non-hydrolysing solvent such as benzene, prevents the formation of free salicylic acid, a product of hydrolysis. This sounds all right in theory, but in practice it falls a long way short of this ideal. Just eighteen months ago one firm boldly advertised that their aspirin tablets gave no coloration with the ferric chloride test (B.P.), indicating the absence of free salicylic acid, but the bottom was knocked out of this stunt by the writer proving sophistication, by the addition of tartaric acid, to mask the B.P. test. Reference was made to this case in my paper on aspirin read before the British Pharmaceutical Conference held at Liverpool in July 1920 (C. & D., II., 1920, 1037), and supplemented by a more detailed contribution to the "Analyst," which however, did not appear in the latter journal until the following November (1920, 45, 412). As a matter off fact, acetylsalicylic acid of commerce (the drug, not the tablet) is itself of such instability that it is impossible to keep it under normal conditions for many months without some hydrolysis taking place spontaneously. Of course, it is not impossible to make compressed tablets which will disintegrate readily and are as free from the products of hydrolysis as (but no freer than) the aspirin from which they are made—which is not saying a great deal, and moreover is a horse of a different colour. I have examined the aspirin tablets of practically every make of repute in this country, and, like Mr. Parry, I have never yet seen one on the open market which is absolutely free from acetic acid and/or salicylic acid, which is the claim Mr. Haddock makes. There has been a lot of work done on acetylsalicylic acid during the past ten years by different investigators all over the world, and it is curious how unscientific some of the deductions are. For example: On page 201 of the "Year Book of Pharmacy," 1921, there is an abstract from a Belgian journal referring to the use of "sodium citrate to increase the solubility of acetylsalicylic acid,"

that no reaction for free salicylic acid is given with FeCl<sub>3</sub>, and that CHCl3 removes nothing from it. This is as misleading as it is incorrect. The use of four parts of sodium citrate to every one part of aspirin (note these are approximately proportional to the molecular weights of these substances) in the presence of water would result, not in rendering the aspirin, as such, soluble, but in converting it into a soluble sodium salt. Again, some free salicylic acid is practically certain to be present in the solution, but would be masked by the citric radicle. In the writer's paper previously referred to, it was shown that both citric acid and tartaric acid will interfere with the B.P test, viz. violet coloration with ferric chloride (1 per cent. of citric acid and about 2 per cent. of tartaric acid, each being sufficient to mask 0.2 per cent. of salicylic acid). To find the salicylic acid in such cases, however, it is only necessary to shake with a mixture of ether and petroleum ether in equal parts, remove the ethereal layer, evaporate spontaneously, and test in the usual way with ferric chloride solution. There would be no acetylsalicylic acid existing as such for the CHCl3 to remove, but there is a residue which contains free salicylic acid along with the masking agent, viz. the citric radicle, hence the erroneous deduction quoted in the abstract. The advantage of using a mixture of ether and petroleum ether is that it leaves behind the masking agent. In this instance most probably di-sodium hydrogen citrate would be a product of the reaction which, by equation, might be stated thus:

$$\begin{array}{c} C_{6}H_{4} & COCCH_{3} \\ COOH & + C_{8}H_{4}OH(COONa)_{3}11H_{2}O = C_{6}H_{4} & COONa \\ + C_{8}H_{4}OH & COONa \\ - COONa \\ - COOH \\ + 11H_{2}O & \\ \end{array} \\ \begin{array}{c} (Mol.\ wts.)\ 180\cdot064 \\ (Approx.)\ 1\ part & 714\cdot256 \\ 4\ parts & \\ \end{array}$$

(Approx.) 1 part

Since neutral citrates serve equally well with citric acid, it would seem as if hydrogen ion concentration has no direct bearing on the phenomenon, while, having regard to the peculiar behaviour of citrates and tartrates with iron salts, it is not at all improbable that a sodium salt containing both acid radicles might not be formed; in other words, a citro-acetylsalicylate of sodium.

Nottingham.

Yours faithfully, A. NUTTER SMITH.

#### Degrees in Pharmacy

SIR,—It was with great pleasure that I read "Xrayser II.'s "further contribution (C. & D., December 3) on the above question, but I think it demonstrates his complete misunderstanding of the situation. He states that he is not indifferent to education, and then throws cold water on academic distinctions as such. What are the facts? Bluntly put, these:

1. Present-day pharmacists, with a few exceptions, are almost untrained in pharmacy and innocent of any com-

mercial training.

2. Apprentices under these conditions have to trust to

luck, as they get no real training.

3. The examinations are a fitting findle to a course of study compounded of "sham" and "cram," and, quite naturally, carry neither weight nor recognition.

4. Most pharmacists feel that this is so, but fear to say it. The "powers that be" know that it is so, know that we know, and act on their knowledge.

The University Course (which, if the Pharmaceutical Society of Ireland is wise, will in the future run concurrently with the training of a Ph.C.) aims at giving, not the smattering which satisfies "Xrayser II." because it differentiates between the chemist and the quack, if, indeed, it has even so much effect, but a thorough, practical, wellthought-out, and painstaking training in such subjects as will enable the student to tackle successfully all the problems of his life work, and leave him a little knowledge over and above, so that, given energy and foresight, he may take full advantage of opportunity when it arises. Incidentally, the University grants the right to use certain letters as proof of the attainment of a desired standard. This is what the hard-headed business men who advised

the University authorities of Belfast to institute a course of training and the grant of a degree in commerce, engineering, science of textiles, pharmacy, etc., understand by "academic distinctions." As it stands at present the course of training in pharmaceutical subjects for the licence of the Pharmaceutical Society of Ireland cannot be accepted at any stage by the University authorities, on account of the insufficient preliminary education and worthless subsequent training of pharmaceutical students, and it is the realisation of this state of things that forces us in the direction of a distinction that "our own Societies cannot give us." . . . Yours faithfully, TORCY (6/12).

The Composition of Cigarettes

SIR,—"Xrayser II." in his reference to Professor Dixon's address on drug habits calls attention to the pleasant alternative offered to the "high-browed smoker" of being either "poisoned by nicotine in cigars or by carbon monoxide in cigarettes." The prospect is not attractive, but the learned Professor's condemnation of "the weed" is mild compared with a recent fulmination of the Anti-Cigarette League of Chicago, in which the Board of Managers announce that they have procured the results of investigations of the London "Lancet" laboratory, which disclosed that, in addition to nicotine, cigarette and tobacco smoke were found to contain prussic acid, acrolein, and carbon monoxide. "These gases were used in large quantities to kill soldiers in the late World War," continues the announcement; but, not satisfied with this catalogue of evil contents, "the managers" conclude by asserting that cigarette smoke contains several other deadly poisons, "including furfural, an irritating substance said to be about fifty times as poisonous as alcohol." A correspondent drew the attention of the "Lancet" to this remarkable indictment of cigarettes, and in a reply the editor recalls an analysis of American cigarettes carried out in the "Lancet" laboratory and published in December 1899. The investigation was undertaken in consequence of statements in certain New York newspapers of paralysis, collapse, lunacy, and suicide said to have been caused by cigarette-smoking. Cigarettes of the same brands were purchased both in New York and London, and subjected to close study and minute analysis. The cigarette-paper, whose ratio to tobacco had been calculated, was analysed with equal care. The "Lancet" analysts showed that the allegations in regard to the presence of foreign poisonous materials in cigarettes were entirely unfounded, save that in one instance there was bare evidence of a trace of copper in the paper. "No reference was made in the report to the presence of prussic acid, acrolein, furfural, or the like. In an article on toxic factors in tobacco in general, published on April 6, 1912, acryaldehyde or acrolein is mentioned among the irritating bodies which may be present in tobacco-smoke. In a further article on the same subject the presence of furfural in minute quantities was noted in the tobacco-smoke of certain cigarettes and smoking mixtures, and the chemistry of its presence was explained." Sir Squire Sprigge concludes that the mention of furfural by the Chicago Anti-Cigarette League is misleading. Professor Dixon gives hydrocyanic acid among the products of combustion of cigarettes, but the amount is so small as to be negligible. The whole point with regard to cigarette-smoking is whether the smoker inhales or otherwise. The cigarettesmoker who inhales twenty cigarettes a day stands a good chance of developing "the vertigo, tremors, nausea, anæmia, and loss of memory for recent events which are symptoms of chronic carbon-monoxide poisoning," but, on the other hand, the cigarette-smoker who is attracted more by rhythm and sight and does not inhale may continue to indulge his habit indefinitely with absolute impunity.

Yours sincerely, М.Д., Рн.С. (22/11).

Insurance Dispensing-fees

SIR,—I see in the note on Insurance dispensing-fees (C. & D., December 3, p. 58) that the new terms will probably involve an all-round reduction of a penny in

chemists' dispensing-fees, but it is hardly fair to compare the panel pharmacist's position in this respect to that of the panel doctor. It is true that the doctors have consented to a reduction in their payment for the coming year, but it must be remembered that this payment is in the nature of a capitation- or retaining-fee, while the pharmacist is only paid for actual work done. For example, if a doctor has a panel of a thousand patients, he draws round about £500 a year, and he would still draw the same amount if not a single one of those patients required medical advice during the twelve months, and it is very doubtful whether more than a small percentage actually do receive treatment, so that the reduction of the medical man's payment does not operate in the same way as the reduction of the pharmacist's fees. The dispensing-fee already paid is, of course, a ridiculous figure if looked on as payment for professional services, and if the reduction is based on the ground of the fall in the index-figure, it takes no account of the fact that at least half the fee goes in establishment charges, and these are items which have not come down; in fact, some have gone up in cost: rent, rates, gas, electric light, coal, water—all these show no reduction at present, and therefore any lower payment must come off the wages bill. One of the chief causes of complaint among panel pharmacists is that, as usual, the publication of the proposed figures has been left to the last month of the year, when but little time remains for organising discussion and opposition, and we shall doubtless be faced again with a more or less accomplished fact, and be recommended to accept the offer "lest worse befall us." Now that we have got the R.P.U., why cannot pharmacists take a lesson from the Scottish Federation, which definitely refused to accept inequitable remuneration? Yours faithfully, NEW TERMS (3/12).

SIR,—The various statements that Insurance dispensing work could not be made to pay a living wage or profit if it were run by itself and not in conjunction with the other departments of a chemist's business have led me to look up a few figures with a view of analysing them. I have assumed, therefore, that a pharmacist, with a pharmacy doing nothing else but panel work, receives a round number of 2,000 prescriptions a month; of course, he would have to make a start, and I do not suppose that he would survive long enough to reach this figure unless he had sufficient reserve to live on in the meantime, but it is necessary to take some number as a basis of argument. In the C. & D., December 3, p. 63, the statistics are given for the first three quarters of the year for Middlesex, and, as this is a well-populated area, I have considered these figures as representative. We find, therefore, that the average payment per prescription was 9.74d., or, in round figures, 10d., and the fees average 5.3d., so that, taking into consideration loss by wastage, falling markets, deduction for Pricing Bureau, just half the total amount pays for drugs and half for fees. Therefore, for 2,000 prescriptions the pharmacist would receive a cheque for £84, half this (£42) being fees, or about £10 a week, out of which he has to pay all his rent, rates, taxes, corks, labels, paper, etc., and salary. Taking into consideration the kind of district which would be capable of returning 2,000 prescriptions a month, it would not be unreasonable to estimate £5 for expenses, leaving £5 for wages. Now, 2,000 a month is seventy-six a working-day, and I do not think it possible that one man could cope with this number daily—certainly not in the evening rush, as most of the work would come in then—so that his £5 wage would have to pay his own salary and that of an assistant as well. Profits, nil. And now we are faced with a penny reduction in fees. It does not sound much, but a penny in fivepence is one-fifth; therefore our panel pharmacist's £10 weekly will in 1922 be reduced to £8, his establishment charges remain the same (£5), and he has £3 left to live on and provide assistance. If any of your readers can show that these figures (taken in round numbers) are not approximately correct I shall be pleased to see what they estimate the position to be.

Yours faithfully,

PANEL CHEMIST (19/9).

#### Legal Queries

- W. S. P. (21/11).—The word "sandalwood" is public property, and would not be accepted for registration by the Registrar of Trade Marks.
- J. M. (22/11) and O. W. & S. (26/11).—The method of registering trade-marks is explained in The Chemist and Druggist Diary, 1921, p. 301.
- F. G. M. (25/10).—The title "Lung Balsam" on a label renders the preparation liable to medicine-stamp duty. "Lung mixture" is a non-dutiable title.
- D. B. (30/11) asks whether it is necessary to pay Unemployment Insurance contributions in respect of an apprentice. [An apprentice comes within the Unemployment Insurance Scheme if he is of the age of sixteen or over.]
- J. M. H. (70/35).—A pharmaceutical chemist who holds the Irish licence and is also on the Medical Register can carry on business in Great Britain as a chemist and druggist so long as in obtaining the medical diploma an examination in pharmacy was passed.
- A. B. (26/11).—When you receive a Winchester quart of liq. morph, hydrochlor, from your wholesale house you must enter it in the purchase side of the recordbook kept in accordance with the Dangerous Drugs Act Regulations.
- L. D. S. (29/11).—The claim of proprietary rights involved in the use of the words "prepared only by" neutralises the registration of the article as a "known, admitted, and approved" remedy. The word "only" should be deleted.
- C. R. W. (1/12) states that a water spring which has arisen in his neighbour's garden is running into his, and he asks whether he has any remedy. [We assume that the spring has developed from natural causes, in which case "C. R. W." has no redress against his neighbour.]
- G. H. C. (2/12).—Medical practitioners are "authorised persons" under the Dangerous Drugs Act Regulations, and a chemist may supply them with "dangerous drugs" without requiring a wholesaler's licence. An entry of the supply must be made in the record-books kept in accordance with the Regulations.
- HgCl (3/12).—The preparations containing mercury perchloride and carbolic acid are poisons within Part II. of the Poisons Schedule of the Poisons and Pharmacy Act. You can sell the preparations to hairdressers, but if the hairdressers sell them to the public they would be infringing the Pharmacy Acts.
- A. W. W. (9/11) asks whether a clause in an apprenticeship deed restraining the apprentice from opening a business within a mile of his master's shop, for a period of five years after the termination of the agreement, would be legally binding. [In our view the restriction is reasonable, and therefore would be valid and enforceable.]
- B. R. M. (29/11).—A prescription containing nepenthe 3iv. in 2 oz. of a mixture comes within the Dangerous Drugs Act, and the formalities of the Dangerous Drugs Act Regulations must be observed. Nepenthe contains 0.84 per cent. of anhydrous morphine, and in the 2-oz. mixture there would be  $1\frac{6}{10}$  gr., the limit being  $1\frac{3}{4}$  gr.
- R. M. G. (25/11).—The use on the label of the surname in the manner you suggest would render the preparation liable to medicine-stamp duty unless the name were employed as a brand name on a series of preparations. The recommendation for various ailments is another ground of liability, as the preparation is not a "known, admitted, and approved" remedy.
- Cough (28/11).—A cough mixture containing tr. camph. co. 3x., liq. morph. mur. 3ij. in 68 oz. is outside the Dangerous Drugs Act and can be sold without observing the formalities of the Regulations, but the Poisons Act conditions must be carried out. To bring the cough mixture within the Dangerous Drugs Act 59½ gr. of anhydrous morphine would be required, and your mixture contains only 9¼ gr. approximately.

- Gentian (29/11).—(1) You need not have a cocaine record-book if you do not keep cocaine in stock, but if you purchase morphine for sale in preparations below the limits of the Dangerous Drugs Act you must make a record of the purchases. (2) The limit of 0.2 per cent. of morphine referred to in the Act means the percentage of anhydrous morphine, weight in weight. You cannot sell liq. morph. by retail.
- C. P. (21/11).—You must treat the prescriptions of the doctor for whom you do dispensing in the manner laid down in the Dangerous Drugs Act Regulations, and the prescriptions must be written as there specified. The simplest method is to copy the prescriptions in the prescription-book kept in accordance with the Pharmacy Act, and then make a cross-reference in the index-book. The prescription must also be retained by you.

Stallax (22/11) asks whether it is usual in apprenticeship indentures to provide for the contingencies of the master or apprentice dying, or the master giving up the tusiness, during the term of service. [It is a common practice to provide in the indentures for a refund of a proportionate part of the premium in the event of the death of the master or apprentice, or in the event of the master giving up the business. Occasionally provision is made also for transferring the apprentice to another master, with a proportion of the premium, if the master should die or give up the business.]

Inquirer (5/12).—Certified midwives who have notified to the local supervising authority their intention to practise may obtain and possess "preparations containing opium." This does not include morphine tablets. The matron of a nursing home should obtain a prescription from the doctor attending any patient who requires morphine injections; the chemist can then dispense the prescription under the conditions laid down in the Dangerous Drugs Act Regulations. You cannot sell the tablets by retail unless to an authorised person, such as a medical man. The matron of the nursing home is not an authorised person.

Como (3/12) is tenant of premises at an annual rent of £23, terminable by a quarter's notice. He sends us a copy of the material portions of a notice which he received on June 23, giving him one week's notice to quit, on a printed form applicable to a weekly tenancy, and increasing the rent by 30 per cent. as from September 29. He asks us if the notice is valid? [Without seeing the notice itself we are unable to express a definite opinion, but the notice of increase of rent appears to be worded substantially in accordance with the Act, and as a week's notice to quit was presumably given in error (a full quarter's notice of increase of rent having been given) we think it is probable that the Court would regard the notice as a valid one.]

F. H. N. (30/11) asks if he can sell the following by retail without infringing the Dangerous Drugs Act:

Ol. anisi ... ... 5iij.
Ol. menth. pip. ... 5ij.
Tr. opii ... ... 5ij.
Tr. camph. co. ad ... 5ij.

The mixture weighs approximately 832 gr., and this quantity requires 1.66 gr. of anhydrous morphine to bring it within the Act, whereas the mixture actually contains 1.33 gr. This makes it just outside the Act, but in our opinion a safety limit should be adopted by halving the quantity of tr. opii. In regard to your stocks of "dangerous drugs" purchased before September 1, you as a chemist are not required to dispose of these because of your resolution that in future you will not dispose drugs coming within the Dangerous Drugs Act. The stock must be shown on demand by a person duly authorised by the Home Office.

Chemist (5/12) gave up a position as manager, a few months ago, in order to take up a similar position elsewhere with free occupation of the living-rooms over the shop. It was verbally represented to "Chemist" that the new post would be a permanent one; that the prospects of the business were very good; and that he could acquire a share in the business later if he should

so desire. The good prospects have failed to materialise, and the proprietor has agreed to sell the business after first offering it to "Chemist" at a price which "Chemist" considers in excess of its value. "Chemist" has been given a month's notice of dismissal, and asks whether he can claim from his employer, upon the ground of misrepresentation, the expenses he incurred in leaving his previous appointment; and whether he can be compelled to give up possession of the rooms he occupies until alternative accommodation has been found for him. [In our opinion, "Chemist" could not successfully make a claim against his employer upon the ground of misrepresentation; but he might recover damages for wrongful dismissal upon the ground that the period of notice given to him was unreasonably short. The employer will be able to obtain possession of the premises when the contract of service is over without having to find alternative accommodation, as "Chemist's" occupation is purely in consequence of his employment.]

W. L. F. (1/12).—(1) "ALL FOURS."—The formula you send—

Ol anisi ... ... ... mxl.
Ol. menth. pip. ... mxl.
Tr. opii ... ... ... mxxx.
Tr. camph. co. ad ... ... 3j. vel 5vj.

is outside the Dangerous Drugs Act. The preparation has a sp. gr. 0.950, and contains 0.455 gr. in 3j. or 0.405 gr. in 5vj. To bring the mixture within the Act it would have to contain 0.912 gr. and 0.684 gr. respectively. (2) Laudanum cannot be sold to the public (with the exceptions mentioned in the C. & D. Dangerous Drugs Act Card). It may be sold diluted—one in six is a convenient dilution-but, in order to prevent an unsightly preparation, we recommend that the so-called aqueous tincture be used. (3) You must keep a register of purchases of "dangerous drugs," but if you do not sell or dispense within the meaning of the Dangerous Drugs Act Regulations you will have no sales to register. An inspector would most likely want to know what you do with the poisons if you stock them, and it will be to your interest to be able to satisfy him. (4) Paregoric is outside the Dangerous Drugs Act, as it contains less than 0.2 per cent. of anhydrous morphine. (5) Chlorodyne with only 1 gr. morphine acetate in 1 fl. oz. is outside the Dangerous Drugs Act, but we cannot tell you the exact limit that could be contained in the preparation unless we know the sp. gr. Both the labels you submit render the preparation liable to medicine-stamp duty. (6) A cough-mixture containing morphine acetate gr. iij. in 20 oz. is well outside the Dangerous Drugs Act, but it is a poison within Part II. of the Poisons and Pharmacy Act. (7) The words "antiseptic throat pastilles" on a label render the article liable to medicine-stamp duty unless the pastilles are a "known, admitted, and approved" remedy. (8) If chlorodyne lozenges contain an appreciable quantity of morphine they can only be sold under the conditions of Part II. of the Poisons Schedule. There is no legal standard for chlorodyne, but it is clear that the preparation must contain morphine. If the amount of morphine in the lozenges is very small the legal axiom, "De minimis non curat lex," applies. (9) You must enter purchases of "dangerous drugs" in the appropriate record-books kept under the Dangerous Drugs Act Regulations, and in ordering from the wholesale house evidence must be given that you are entitled to possess the drugs. The printed order form is sufficient for this.

#### Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon progretary articles nor to publish supposed formulas for them.

S. T. C. (3/11).—The frosting of glass is carried out by exposing it to the vapour of hydrofluoric acid, or, better still, by using an etching cream. The latter consists of equal parts of ammonium fluoride and barium sulphate made into a cream with hydrofluoric acid. The cream is applied to the glass overnight and washed off in the morning.

G. A. B. (22/11).—For the Apothecaries' Assistants' examination a suitable chemistry book is Roscoe's "Lessons in Elementary Chemistry, Inorganic and Organic" (Macmillan, 6s.).

B. P. (17/11).—CUP MOSS.—The botanical name for cup moss or cup lichen (the more correct designation) is Cladonia pyxidata, Fries, formerly Scyphophorus pyxidatus, Hook.

F. N. (14/11).—UNEMPLOYMENT CONTRIBUTIONS.—The present amounts of unemployment contributions as increased by the Unemployment Act were given in the C. & D., November 19, p. 49.

Cooke (38/2).—We do not undertake to identify samples of drugs and chemicals, our analyses being confined to clucidating difficulties regarding preparations of novel features.

Orientalist (5/10).—We do not know the composition of the preparation which you state is largely sold in India.

L. L. (23/11).—COCOANUT-OIL SHAMPOO POWDERS.—We last published a formula for cocoanut-oil shampoo powders in the C. & D., II., 1920, p. 52, as follows:

Make into a powder, which is used with a pint of water as a shampoo.

F. H. F. (29/11).—Gattefosse's works on perfumery are published in French. They are obtainable from "Parfumerie Moderne," 19 Rue Camille, Lyons.

R.~W.~(22/11).—Cold and inluenza mixture.—( $\mathcal{C}.~\&~D.~Diary,~1904,~No.~4):$ 

Pulv. trag. co. gr. x. gr. iv. Ammon. carb. Sp. camph. miv. Tr. scillæ mx. ... Syr. tolu. mxlv. ... Chloroformi mj. • • • • • • Tr. aconiti mij. Aq. ad ... зj.

Parasite (26/11).—We do not know the composition of the proprietary article you mention.

Dose 3ss. ad 3j. om. 4tis horis.

#### Retrospect of Fifty Years Ago

Reprinted from "The Chemist and Drugsist," December 15, 1871
Weights and Measures

Professor Redwood, at the December meeting of the Pharmaceutical Society, read a paper in which he advocated the adoption of certain changes in the designation of weights and measures in any new edition of our Pharmacopæia, and in which he pointed out certain difficulties in the way of such a change, and suggested its balancing advantages. Dr. Redwood was a very hard working member of the Pharmacopæia Committee, and his intimate association with all matters of pharmacy for so many years past places his opinion higher than that of any other critic on this subject. His plan is described in our report of the meeting on another page, and it will be noticed that while Dr. Redwood advocates it partly as an improvement of the system now in vogue, he has a still stronger reason in the fact that it would pave the way for the gradual introduction of the metrical system into the British Pharmacopæia. We may, we think, with the utmost respect for Professor Redwood, but in the name of all British chemists and druggists, protest against this piece of mistaken kindness. The practical result of the introduction of an intermediate system, whereby proportions were to be indicated, would be extreme confusion, and would serve no useful cnd whatever. We doubt not that a decimal division of our weights and measures must come ultimately; but it is plain enough that at least 50 per cent. of the inconvenience of the alteration would be saved by changing to such a system straightway than by doing so in two acts.



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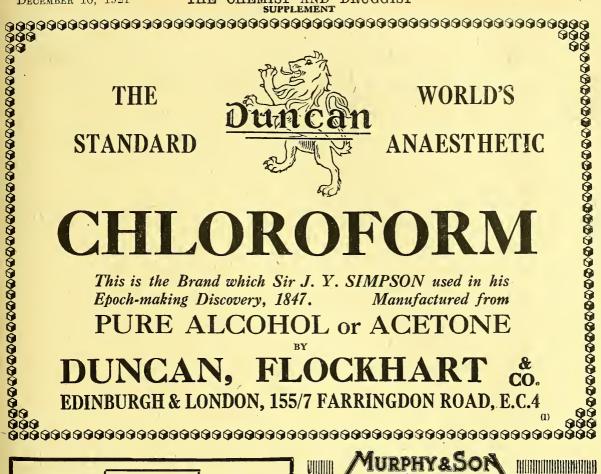
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TEROGON, A New Antigonorrheal for Internal Administration.

For literature and other information apply to CAVENDISH CHEMICAL CORPORATION, Empire House, 175 Piccadilly, London, W. 1, England.

BUTLER & CRISPE, English Distributors. MAY, ROBERTS & CO., Ltd., Irish Distributors, 16 Westmoreland Street, Dublin.

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#### Your Physicians Will Prescribe Esterol—Stearns

You know the popularity of Benzyl Medication. Your doctors recognize the value of Benzyl Benzoate, but they also realize its disadvantages—and therefore appreciate the many advantages of Esterol—Stearns (Benzyl Succinate, Medicinal.)



Esterol—Stearns is a tasteless and odorless powder instead of a nauseating liquid. It contains 42% more Benzyl radicle than Benzyl Benzoate and is non-toxic, non-narcotic and non habit-forming.

Your doctor will acknowledge that Esterol is one of the biggest things in Materia Medica today. Your physicians are being detailed and circularized.

Esterol—Stearns is indicated in excessive peristalsis of the intestines

as in Diarrhea and Dysentery, Mucous colitis, Spastic constipation Dysmenorrhea, Biliary colic, Labor pains, Contractions of seminal vesicles, Ureteral colic, Circulatory conditions, Angina pectoris and hypertension, Bronchial spasm, Asthma (certain forms), Hiccough, Irritating cough.

Esterol—Stearns is supplied in bottles of fifty tablets, each tablet containing five grains Esterol—Stearns (Benzyl Succinate, Medicinal). Prepare to meet the demand by placing "Esterol—Stearns" on your want book now.

Manufactured solely by

#### Frederick Stearns & Company

Detroit, Michigan, U.S. A.

Branch Contario, Canada, and Sydney, Australia. Branch Offices: New York, San Francisco, Calcutta, and Cape Town.





# LORIMER-MARSHALL, Ltd.

# Winter Specialities

Lung Tonic, Children's Cough Mixture, Cod Liver Oil & Cod Liver Oil Emulsion, Honey & Lemon Linctus,

Special Low Ouotations for Season's Requirements.

#### LORIMER-MARSHALL, Ltd., 12 Tower Hill, E.C.3

**Factories** 

Britannia Works, Cold Blow, Hatcham, S.E. 14



and are anxious to feature this widely advertised line should send at once for the above fine new showcard to—

Peat Products (Sphagnol) Ld. (Dept. B. 12) 18/19 Queenhithe, E.C. 4.

For NEURALGIA, HEADACHE, RHEUMATISM & INFLUENZA.

TRADE TERMS:

MINIMUM RETAIL PRICE per doz. 12/-PRICE

Bonus of 101- on £5 worth for 14 days' Window Display Terms: Cash in one month. Orders carriage paid. Minimum Retail Price: Loose powders 2½d. each, yielding a profit of 99%.

CEPHOS LTD., BLACKBURN, Lancs. **电影用用数据性的用证的形式的形式的现在分词数据用的形式** 

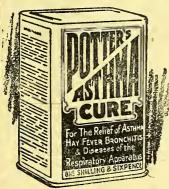
#### the best thing for Rough Skin and HAPPED HANDS.

Sold everywhere at the popular price, 3d. per tablet. TRADE PRICES-6 dozen, 11/6; 12 dozen, 22/-Carriage Paid, 13 to dozen, for Cash with Order. Discount-Orders of £1, 2½%; £5, 5%; £10, 7½%

#### SPECIAL OFFER.

13 dozen packets with advertising matter, 22/-; less 2½ % (£1.1.5 net). Cash with Order.

MILNER'S CHEMICAL CO., LIVERPOOL



#### Fac-simile of the well-known package.

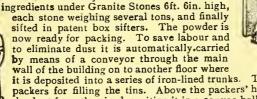
#### HOW A SUCCESSFUL REMEDY IS PRODUCED

POTTER'S ASTHMA CURE has been advertised at a cost of many thousands of pounds in the leading newspapers, periodicals and journals for the last twenty-five years, and the proprietors, Messrs. Potter & Clarke, Ltd., have every reason to claim not only the largest sale in Great Britain, but also in the world.

A visit to the store rooms will give an idea of the huge quantity of materials required. Of one of the principle ingredients-Strammonium-the stock (a visible mountain of bales) is never less than 20 tons. On the arrival of the new crop in the Autumn this is very much more. Only genuine Datura Strammonium and Datura Tatula of high alkaloidal value is allowed to enter Withered or old stock and the so-called Spanish or False Strammonium is rigidly excluded, Each bale is passed by an expert before use. The fumes of Strammonium when burnt are apt to cause headache, but the

additional herbs used in POTTER'S ASTHMA CURE counteract this. These herbs are first put through huge disintegrators working at a speed of 3,800 revolutions per minute, falling into brick and steel cupboards on the floor beneath. Here they are milled with the other

These are wheeled to the packers for filling the tins. Above the packers' heads, electric fans draw the dust from the air, depositing it in a canvas balloon.

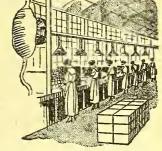


Upstairs in the Carpenters' shop the familiar 1 gross cases are being made and branded. In the printing room, we see labels being printed in English, French,

Dutch and Flemish. A considerable trade is also done with customers' own name, and several popular brands throughout the world are packed here also. In the manufacture of POTTER'S ASTHMA CIG-ARETTES and POTTER'S ASTHMA SMOKING MIXTURE it is necessary to remove all stalk from the herbs. After many years of patient experiments the firm have designed machines to do this, and it is interesting to watch the stalks being ejected from one end whilst the leaves rubbed to the required fineness drop into the cupboard below.

It will be noted the great precautions taken against fire. Concrete floors, iron indow frames, iron doors, and a complete service of Fire Hydrants and excinguishers are equipped thin is model factory.

POTTER'S ASTHMA CURE and preparations were one of the first to be placed upon the P.A.T.A., and there is no doubt that its success is due, apart



The Parking Department showing Dust Extractors.



Milling under Granite Stones.

Motor Vans loading for delivery

from its medicinal value, to the friendly co-opera-tion of the retailer.

MANUFACTURING CHEMISTS

60, 62, 64, Artillery Lane, LONDON, E.1 and at 24, Luna Street, Great Ancoats, MANCHESTER.

POTTER'S ASTHMA CURE GIVES INSTANT RELIEF

ż

London,



SNOWFIRE is in great demand. Other traders are asking for stocks but we have refused to supply except to chemists and drug stores.

The whole of this trade is awaiting you, but let the public know you stock it. Display Snowfire well it will pay you.

Snowfire is being consist-ently advertised.



There is an all-the-year-round sale Snowfire. Shows substantial advertising matter free.

F. W. Hampshire & Co. Ltd. Riverside Works, DERBY.





TRIAL ORDER of Carriage Paid TABLETS CAN BE OBTAINED FROM ALL WHOLESALE HOUSES

Packed One Dozen on Showcard.

BEECHAM'S PILLS

WHOLESALE PRICES.

#### Beecham's Pills:

10s. 6d. per doz. net. 1s. 3d. size 26s. 6d. 3s. Od. 50s. 0d. 5s. Od. new size, contains double

#### Beecham's Coug

1s. 3d. size 10s. 6d. 22 26s. 6d. 3s. 0d. 92

the quantity of 3/- box.

Minimum quantity £5 value.

Packages FREE.

Carriage PAID.

CASH WITH ORDER.

Cheques to be made payable to THOMAS BEECHAM, and crossed "Parr's Bank, Ld., St. Helens."

# Make Your Profits Safe -Sell Musterole

Once used, Musterole retains a permanent place in the family medicine chest. Repeat sales are steady and remunerative. Here is the reason why you should stock Musterole. A wide and consistent advertising campaign is steadily increasing the demand for this simple, certain and convenient remedy against coughs and colds, aches and sprains, congestions and inflammation. Why not secure the Musterole sales of your district, and thus make sure of a continuous source of profit? Use Musterole window cards and attract this growing business to your shop.



Thos. Christy & Co. 4-12 Old Swan Lane. London, E.C. 4.



size. 5. oz.	Trial	 	:	-	M.R.P. <b>2</b> /-		M.W.P. 18/-
$10^{\frac{1}{2}}$ ,,	Small	 			3/-	••,•	27/-
$17\frac{1}{2}$ ,,	Medium	 • : • •	••••		5/-		45/-
	Large			·	8/6		76/6
5 lb.	Hospital	 			17/6		157/6

Prices for IRELAND, CHANNEL ISLANDS, ISLE OF MAN: Less value of stamps, Wholesale and Retail.

For best terms, carriage paid, write to the Sole Agent-

J. F. MURPHY, 41 St. Ann's Road, LONDON, E. 3.



Sells freely and readily.

icoricine

"RED BOTTLE

10½d-

ST. PETER'S OIL."

1/3 - 12/33/- - 27/-



ESTABLISHED 1854.

5 % Discount 30 days, on orders of £6.

Licoricine is a popular remedy for Coughs and Colds wherever introduced.

Now is the time to get in your stock.

#### MANDALL & Co., LTD.

Tower Works, NEWCASTLE-ON-TYNE

National Telephone: 143 Central.

THE

—still steadily increasing—of ALEXINE is due to powerful and persistent advertising, coupled with the fact that it is the *one* tonic-restorative consistently recommended by the medical profession. Thousands of jaded brain-workers buy ALEXINE. Tens of thousands of neurasthenics, nursing and expectant mothers, convalescents, sufferers from anemia, etc. etc., buy ALEXINE regularly because it is the re-vitaliser with no bad after-effects.

ALEXINE will sell well in your district, because it is the most frequently prescribed remedy for all modern ailments—neurasthenia, mental and bodily exhaustion, impotency, etc. etc.

is consistently and persistently advertised in the largest-circulation periodicals in Great Britain. YOU have scores of customers who will buy ALEXINE once you tell them that you have a stock. Retails at 51- a d 101- a bottle. Write NOW for generous terms to the Sole British Agents:

#### **HEPPELL'S**

Chemists,

PICCADILLY, LONDON, W.1.

## REDUCTION IN PRICE

#### BISHOP'S NATURAL FRUIT SALINE

is now **reduced** to **19**/- per dozen, subject; the Retail Price remaining at **2**/**3** per bottle, P.A.T.A.

A Bonus is offered on orders for 6 dozen, or 12 dozen on consideration of Chemists giving a Window Display.

Attractive Showcards and Price-cards will be forwarded with each order.

#### BISHOP'S NATURAL FRUIT SALINE

is a business bringer. It sells well all the year round.

To the Chemist.—11½d. per bottle profit if you purchase one gross lots.

11d. per bottle profit if you purchase 6 dozen lots.

Bonus quantities forwarded carriage paid.

It pays to push BISHOP'S.

PREPARED ONLY BY

ALFRED BISHOP, Ltd., 48 Spelman Street, LONDON, E.1.

One of the very best sellers in your business, with a specially rapid sale, and well advertised.

#### **WOODWARD'S**

# "GRIPE WATER"

1/3 per Bottle.

(Under the protection of P.A.T.A.)

NET PRICE:

I gross, delivered free to your door, £7.

Your profit is  $28\frac{1}{2}$  per cent.

No more used "Gripe Water" Bottles required.

1/3

SOLE PROPRIETORS:

W. WOODWARD (1920) LTD., 79-87 Fortess Rd., London, N.W. 5

# Petroleum **Jelly**

White, Yellow, Amber, & Ruby Red, for Pharmaceutical Veterinary purposes

MEADE-KING, ROBINSON & CO., LTD. LONDON MANCHESTER

#### SALVO PETROLIA

The Perfection of Petroleum Jelly MANUFACTURED SOLELY BY

THE DEE OIL COMPANY, Ltd. DELTA WORKS, BOOTLE, LIVERPOOL.

Packed in barrels, kegs and smaller packages according to requirements.

Other Grades PETROLEUM JELLIES, WHITE BASES, ETC. Samples and prices on application.

"OLEUM DEELINÆ," a certain cure for Eczema.

Wires: "Cestrian Liverpool."

#### DOWELL'S PATENT ALTH PIPES.



ssorted Shapes and Sizes to sell at 3/6 each. Send postcard for sample dozen.

HARWOOD **BROTHERS** Est. 1898. Manufacturers of Briar Pipes and Smokers' Articles,

3/20 Richmond Street, LIVERPOOL.

Methylating Company,

Telephone:

# SEITZ **ASBESTOS FILTERS**

For Pharmaceutical Purposes.

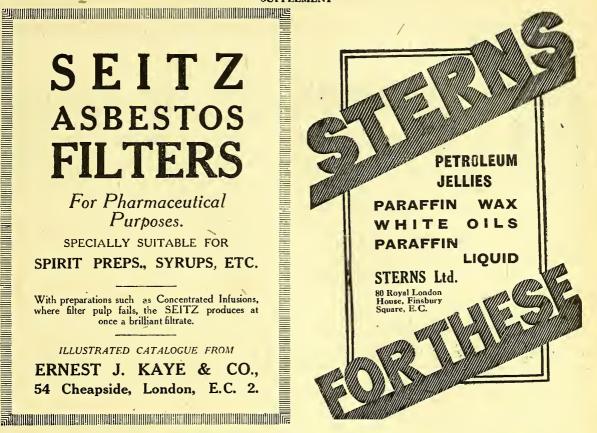
SPECIALLY SUITABLE FOR

SPIRIT PREPS., SYRUPS, ETC.

With preparations such as Concentrated Infusions, where filter pulp fails, the SEITZ produces at once a brilliant filtrate.

ILLUSTRATED CATALOGUE FROM

ERNEST J. KAYE & CO., 54 Cheapside, London, E.C. 2.



# PETROLEUM JELLY.

Gough, Kidston & Co.

Tel. No.:
Avenue 8057
(2 lines).

Tel. Add.:

Kidstonism,

Bilgate, London."

Chemical Manufacturers, Tanning & Dyewood Materials & Extracts, Gum & Wax Merchants,

BERMONDSEY.

43/45 Gt. Tower Street, London, E.C. 3. Tel, No.: Hop 2029.

# ADEPS LANÆ,

THE FINEST BRITISH LANOLINE PRODUCED IS MANUFACTURED BY

PHARMACEUTICAL LANOLINE

Carnwath Road, Fulham, London, S.W.6.

Telephone: Putney 42.

WHO INVITE INQUIRIES.

Telegrams: "Batapo, Walgreen, London."

The New Alternative for Cod Liver Oil

# Malfelline ARK

Maltoline Advts. appear in the Xmas Numbers of:

TATLER SKETCH BYSTANDER EVE VOGUE WINTER'S PIE TRUTH STRAND MAG. PEARSON'S NASH'S LONDON WINDSOR PAN GRAND WIDE WORLD MAG. OUTWARD BOUND LONDON OPINION PASSING SHOW JOHN O' LONDON WELDON'S FASHIONS, Etc.

The Maltine Company's new preparation which received such an excellent reception at the recent

# LONDON MEDICAL EXHIBITION

where eminent physicians stated that "Maltoline" is just the preparation wanted for those who find Cod Liver Oil repulsive and are unable to take it.

Produced in Powder form with a delicious flavour.

Retail Price, 3/- per bottle, P.A.T.A. Cost Price, 2/3,

Supplied by all Wholesale Houses.

THE MALTINE MFG. COMPANY, Ltd.

9 Holborn Viaduct, LONDON, E.C. 1.
ESTABLISHED 1878. Phone: CITY 1765.





# Zomogen

contains

#### Natural Iron in the most easily Assimilable Form.

Zomogen is a valuable tonic food composed of unaltered hæmoglobin and other bloodforming elements. In the treatment of anæmia of every kind Zomogen is far more effective than preparations of metallic iron. It enables the physician for the first time to prescribe iron in the natural state in which it is present in the red blood corpuscles. In this state it is most easily assimilated by children and invalids, and as no chemical preservatives whatever are used in the preparation of Zomogen, nausea and gastric irritation are avoided entirely.

Doctors and nurses all over the country are being. invited to test Zomogen for themselves at our expense. So confident are we that its merits will ensure a certain and rapidly increasing demand, that we have arranged, in order to give the public the opportunity of buying Zomogen everywhere, to guarantee the sale of every bottle ordered now. Before being placed on the market, Zomogen was submitted for trial to Medical Authorities of the highest standing. It has been proved to be of the greatest value in cases of Anæmia, Neurasthenia, Debility, and Marasmic conditions.

ZOMOGEN is an entirely British Product.

find that Zomogen is one of the best selling and most profitable lines that you have ever handled.

We undertake to buy back from you any bottles of Zomogen un-

sold 6 months after you have ordered them, and to buy them

back at the price you paid, with-

This guarantee insures you against any possible risk. Send

us your order now, and you will

out any deduction whatever.

Wholesale Price, 45/- per doz. Retail Price 5/- per buttle.



Zomogen Food Products Ltd., 63, York Place, Edinburgh. Wholesale Distributors: J. C. GAMBLES & CO., 49, Farringdon St., London, E.C.4.

#### VIN.FERRI CITRATIS, B.P.

Bottles 32/- doz.;  $\frac{1}{2}$ -bottles 18/- doz.

### Liebig's Beef&MaltWine

Bottles 38/- doz.;  $\frac{1}{2}$ -bottles 20/- doz.

#### ENGLISH PORT STYLE.

7/6 gallon. Bottles 20/- doz.; Ovals 27/- doz.

Carriage paid on 3 dozen orders.

#### B. ROBINSON & Co., Ltd.

PENDLETON

MANCHESTER.

Phone: 138 Pendleton.

Telegrams:
"Champagne Manchester."



Represents a distinct advance on anything of the kind hitherto pro-Manufactured in Bath under hygienic conditions by an improved process from purest ingredients. Attractively wrapped and purest ingredients.

got up, its distinctive feature of being "MADE IN A MINUTE" predisposes the public in its favour. Tins

ONE SIZE ONE PRICE Made in a Minute

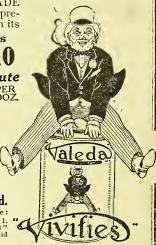
TRADE 25/6 PER PER DOZ

Showcards, leaflets, pack-ing & carriage free to re-tailer. These products are P.A.T.A.

Distributors:
J. C. Gambles & Co., 49
Farringdon St., London, E. C.4.
For Ireland: Hugh Moore &
Alexanders Ltd, The Linen
Hall Dablin Hall, Dablin.

Manufacturers: AUSTEN FOODS, Ltd.

BATH. London Office: 3 Gerrard Street, London, W.1. Sole Makers of "Good as Gold" Baby Food and "Valeda" Invalid Food.



#### VITMAR

The new vitalising food proved to contain the three principal vitamines 

YOUR WHOLESALERS CAN SUPPLY YOU

Manufacturers:

Food Specialists,

CALLARD & CO., 74 Regent St., LONDON, W. 1.

#### New Season's DANDELION ROOT

SPECIAL NOTICE.

Owing to the drought and the unsettled state of the labour market, very small quantities have been collected this season; stocks are exceptionally low, and later on much higher prices will rule. Early purchases are advisable, quotations on application. WE CAN ALSO SUPPLY-

English Belladonna Root, White Bryony Root, Comfrey Root, Burdock Root, Yellow Dock Root, Dog-grass Root, Malefern Root, Digitalis Leaves, Colchicum Corms, Colchicum Seed, Chamomile Flowers, Bittersweet Herb, Mugwort Herb, Poppy Heads, etc.

J. FLEMONS & SONS, Herb Merchants, DUNSTABLE, BEDS.

#### ATKINSON & BARKER'S INFANTS'

THE BEST AND SAFEST INFANTS MEDICINE OF OVER 120 YEARS'STANDING.

Prices and Terms on application to R. BARKER & SON, Ltd. 13 Wesley St., C.-on-M., MANCHESTER.

DOES POISON.

#### MAY WE SUGGEST?

# BEEF & MALT WINE WITH QUININE

#### as a Cold and Influenza Cure.

Can be sold by Chemists without a Wine Licence.

PINTS (12 to 1 gallon) 28/- dozen QUARTS (6 to 1 gallon) 42/- dozen

WE WOULD BE PLEASED TO SEND YOU A SAMPLE, TOGETHER WITH SPECIMEN LABELS.



We are just launching a big advertising scheme in the "Daily Mail" which will undoubtedly increase the demand, and we would be pleased to receive your enquiries, in order that prospective customers will not be disappointed and you also to receive your share of the profit. Bear in mind it will be new business, as this is the only preparation of its kind on the market.

Retail Price 1/6 each net (P.A.T.A.) Wholesale Price 13/6 per dozen

In order to introduce "PELDO" we are offering a special bonus for a guaranteed window display of not less than 14 days as follows:

On Orders of 1 gross a bonus of 18 full-size Tubes.

Attractive Window Display material and Showcards supplied. Sample Tubes supplied gratis in proportion to quantity ordered. Further particulars on application to

#### C. R. HARKER, STAGG & MORGAN, LTD.

Devon Wharf and Bell Wharf, EMMOTT ST., MILE END, E.1.



#### NESTLE FEEDER

The superiority of the Nestlé Feeding Bottle is so obvious that doctors are advising it, nurses are recommending it and mothers insist on having it. Nothing is good enough for their little ones but a bottle which is perfect in hygienic construction; which cannot possibly harbour dirt or disease germs and which ensures that the food is taken without undue effort or excessive air.

Nestle's Feeding Bottle is constructed throughout on scientific principles, it is impossible for the child to detach the teat and rubber valve which automatically cling and are made from pure plantation rubber. Colic is prevented because the flow of air behind the milk is systematically regulated. The feeder, made of virgin glass, can be tilted to and will remain at any desired angle. Its capacity is 10-oz., and every part, including the box, is thoroughly sterilized before leaving the factory.

# Feeding Bot

The Cheapest full-sized Feeding Bottle on the Market.

Easy to sell; brings good profit and rapid turnover.
Write to-day for full details and current trade price list.

**NESTLES** 6-8 EASTCHEAP. (Advert. Dept.), LONDON, E.C. 3.

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#### PENCE'S SOOTHE

RELIABLE. This is Speciality of ours-Best Quality. Well-fitted and Attractively Carded.

Stocked in 106 Varieties. All Good Selling Lines and well known to the Public.

A complete set of Samples can be sent upon receipt of Postal Order for 31/6 Net. \$1 orders and over less 5%. Cash with order. Carriage\_paid on 40/orders and over.

Money returned in full if not satisfied. Write for New List of Prices. Many Reductions.

B. SPENCE, 44 THORNE ROAD, SOUTH LAMBETH, S.W.8

Telephone: Brixton 1772.



(The World-Famous Corn Remover )

"Gets-It" is a liquid which dries at once when applied to corns or calluses with the glass applicator that accom-panies each bottle. Stops pain at once and soon loosens the corn or callus so that it can be lifted right off.

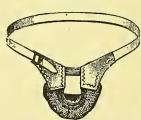
Used by Many Millions throughout the balance of the world, and certain of enthu-siastic reception here.

Now Distributed in Great Britain through

#### THOMAS CHRISTY & CO.

4, 10 & 12 Old Swan Lane, Upper Thames St., London, E.C.4. Manufactured by E. LAWRENCE & CO., Chicago, U.S.A.

#### WE GUARANTEE EVERYTHING WE SELL



Send your Enquiries for **Chest Protectors** Abdominal Belts Suspensory Bandages Finger Stalls Maternity Corsets Magnetic Belts Wrist Straps Surgical Hosiery, etc. to the Actual Makers:

A. B. FROST & CO. Surgical Hosiery Works.

Notes.

ESTABLISHED 35 YEARS.

(3)

# HOT-WATER BOTTLES



#### THE "EMPIRE" BRAND

If you wish to keep up your reputation for reliable quality, you must continue to stock our "EMPIRE" brand of **Hot-Water Bottles.** Do not risk trying an unknown make.

One quality only—the Best. Guaranteed for two years. Prices as follows:

Sizes: inches  $6\times 8$   $6\times 10$   $6\times 12$   $8\times 10$   $8\times 12$   $8\times 14$   $10\times 12$   $10\times 14$  Each Bottle in a strong paper bag, with directions for use.

HOT-WATER BOTTLE COVERS. Scarlet or Grey Plush.

Sizes: inches 6×8 6×10 6×12 8×10 8×12 8×14 10×12 10×14

Each 1/5 1/8 1/10 2/- 2/2 2/8 2/10 3/3

MUFF WARMER. Drab Rubber, 4×6in. Each 2/-

A discount of 5 % for prompt cash is allowed on all amounts of 10/- and upwards. Money returned if goods are not satisfactory. Write for illustrated PRICE LIST, post free for the asking.

#### BURGE, WARREN & RIDGLEY, LTD.

91 & 92 GREAT SAFFRON HILL, LONDON, E.C. 1.

A SATISFIED CUSTOMER IS THE CHEMIST'S BEST ADVERTISEMENT

#### The Marvel Whirling Spray Syringe



Gold Medal Awarded, Paris, 1902, by the Societé d'Hygiene of France

Vaginal Syringes. Particular attention is called to the fact that by reason of its paculiar construction the Marvel Syringe dilates and flushes the vagina with a volume of whirling spray, which smooths out the foods are permits the injection to come into contact with and cleansing the entire surface.

Fully Protected by Patents.





You can safely recommend in

Has no rival on the market, is well advertised, pays a good profit, quality guaranteed. The MARVEL is returnable for exchange if found defective and reported promptly.

Trade price, 125/- per dos.

Retail price, 15/- each.

FASSETT & JOHNSON, Ltd. 86 Clerkenwell Rd., London, E.C. 1.





SAYERS, SILCOX, CUZNER & Co. Ltd. HULL.

THE

#### **TRUSS**

**MAKERS** 

ARE ALSO MAKERS OF

BELTS, CORSETS SUSPENSORY BANDAGES CHEST EXPANDERS CHEST PROTECTORS PNEUMONIA JACKETS WRIST - STRAPS FINGER-STALLS

and all similar articles.

LOWEST PRICES. IMMEDIATE DELIVERY. \$

# 

## THREE QUICK SELLING LINES

WHICH EVERY CHEMIST SHOULD STOCK.



#### "NATIONAL" ZINC OXIDE PLASTER

On 5-yard and 10-yard Spools. 'All Widths.

Strong. Pliable. Non-Irritant. Very Adhesive. Keeps Indefinitely.





#### "NATIONAL" SELF-ADHESIVE PLASTER

On Spools or in Tins.

Two of the numerous Counter Packings which sell at sight.

Write for Price List and Samples to-

A. DE ST. DALMAS & Co., LTD., LEICESTER.

## CHEST PROTECTORS (Grey)

Single Nos. 0 1 2 3 4 5 6 doz. 8/- 8/6 10/6 14/6 18/- 22/- 27/- Double, doz. 17/6 20/- 23/- 32/- 40/- 48/- 60/-

# Gents' Body Belts (Grey Felt) 45/- doz., all sizes.

## H. W. Bottles (Best English)

9 oz. 10 oz. 11½ oz. 12½ oz. 15 oz. Approx weight Grey plush covers 1/5 1/8

## ENEMAS (English)

42/- per doz.

## Chip Boxes (Reduced Prices)

4 oz. C.D. 3/- deep

## THOS. SWALES

20-24 BUTTS COURT & 89 ALBION STREET LEEDS.

YOUR ENQUIRIES SOLICITED FOR OUR

## GUARANTEED

# HOT BOTTLES



OWN NAME (IF REQUIRED)

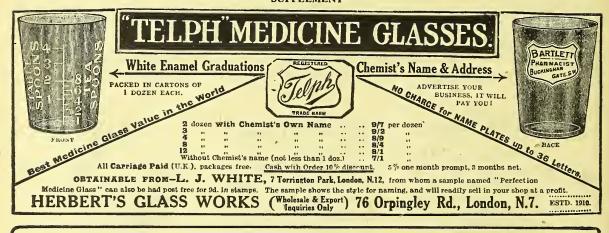
LOTS DOZENS. OF

## ARTHUR BERTON, Limited,

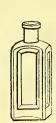
15-17, WORSHIP STREET, LONDON, E.C.2 MANCHESTER and GLASGOW.

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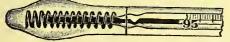
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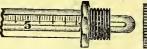
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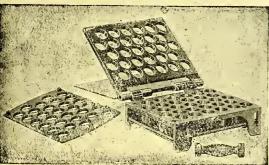
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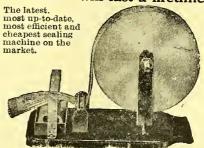
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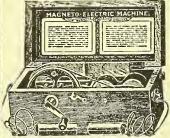


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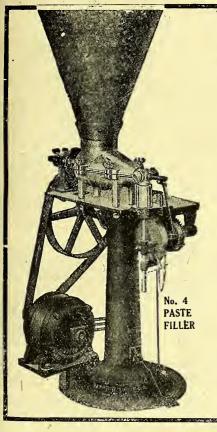
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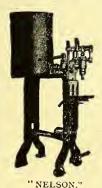
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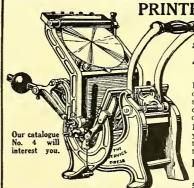


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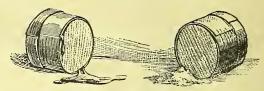
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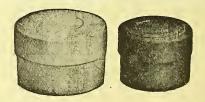
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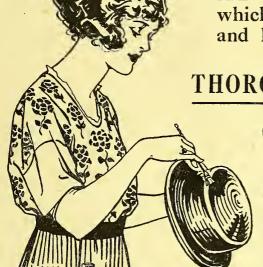
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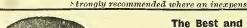
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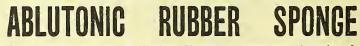
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ANT NOTICE. THE CONTENTS OF THE ABOVE CASES WILL BE PRESS-PACKED AND SENT POST FREE TO Sponges in Small Packages. Fine Turkey. Fine Egyptian and Honeycomb. In let, 2nd & 3rd Qualities. Bleached or Unbleached (state which in ordering). On Strings of 1 dozen pieces, or loose in Bars. At per dozen: 2s., 3s., 4s., 6s., 9s., 12s., 15s., 18s., 24s., 30s., 36s., 42s., 48s., 54s., 60s., 66s., 72s. Bleached Cuban. At per String or Dozen. Wool, Grass, Tellow and Fine. 1s., 2s., 3s., 4s., 6s., 9s., 12s., 15s., 18s., 24s., 54s., 6s., 9s., 12s., 54s., 6s., 9s., 12s., 15s., 18s., 24s., 6s., 9s., 12s., 15s., 18s., 24s., 30s., 36s., 9s., 12s., 15s., 18s., 21s., 24s., 30s., 36s., 9s., 12s., 12s., 12s., 12s., 12s., 24s., 30s., 36s., 9s., 36s., 9s., 36s., 36s., 9s., 36s., 3 LOOSE GOODS DEPARIMENT.

PRICES-Cut Shapes



The Best and most Saleable Rubber Sponge on the Market.



The nearest approach to the true Fine Turkey Sponge yet produced.

VERITABLE TRIUMPH OF BRITISH MANUFACTURE.

Very Soft, Durable and Absorbent.

Supplied in OVAL and ROUND SHAPES.

2 3 Nos. 01 8/- 10/6 15/- 22/- 30/- 39/- 50/- doz. Prices :-- OVAL SHAPES

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LOOFAHS (Vegetable Sponge). In original compressed bales, as imported from Japan. Size 8" by 10" about 5,000 pieces in Bale | Size 1," by 16" about 2,500 pieces in Bale ., 10" ,, 12" ,, 4,500 ,, 1,, ,, ,, 16" ,, 18" ,, 1,800 3,500 ., ,, 12" ,, 14" 18" and upwards

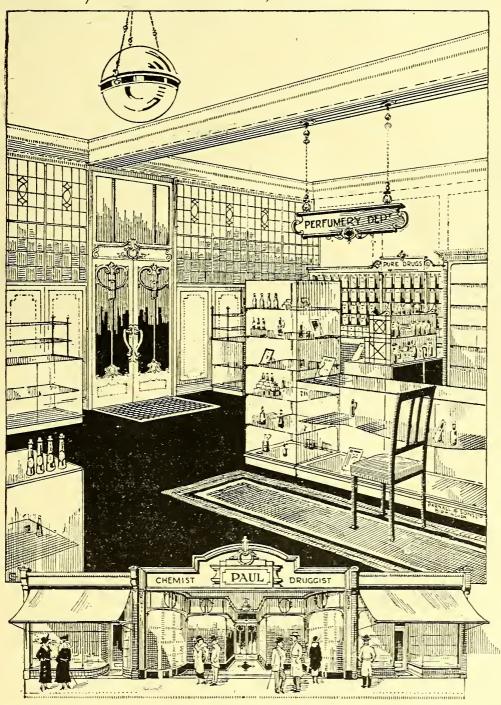
We will send lowest prices on application.

Prices for Loofahs swollen out & ready for sale, at per gross 30/- 36/- 42/- 48/- 60/- 72/-

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Shopfitting Specialists —

SUMMER ROW, BIRMINGHAM. 27



83 MANSELL STREET, LONDON, E. 1.

OUR EXPERTS ARE AT YOUR SERVICEto give practical form to your needs, and to translate your desires into beautiful and workable reality.

44 BROADMEAD, BRISTOL.

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# BETTER BOTTLES

OUR bottles are strong, handsome and of accurate capacity. The necks are uniform, and our customers have no cork troubles.

¶ Supplied in a sparkling white glass, setting the contents off to the greatest advantage.

Medicals, Flats, Panels, Kalis, Limes, Mexicans, etc., in the standard sizes.

M Keenly competitive prices.

Wholesale and Export only.

# LANCASHIRE AUTOMATIC GLASS MANUFACTURING COMPANY Ltd.

TRAFFORD PARK

MANCHESTER.

Independent of any glass bottle combine or amalgamation.

## ND DRUGGIST THE CHEMIS

42 CANNON ST. LONDON E.C.4

**DECEMBER 10, 1921** 

This Supplement is inserted in every copy of The Chemist & Druggist.

## TO COMMERCIAL TRAVELLERS AND OTHERS.

FORM of advertising which was instituted by THE CHEMIST AND DRUGGIST many years ago has become increasingly popular among all trades. This is the "GOODWILL GREETING" used by our advertisers in the last two issues of the year. We now propose to reserve some space in THE CHEMIST AND DRUGGIST SUPPLEMENTS of December 24 and December 31, in order that Commercial Travellers and others who desire it may send Christmas and New Year Greetings to their clients.

Our method has the advantage that the announcements go direct to all the principal places of business connected with the trade at Home and Abroad. It likewise obviates the outlay involved in addressing "Greetings" direct to clients, in view of the present high postal rates.

We have in mind a series of one-inch and two-inch single-column spaces, and charges for these will be obtained by prompt communication with The Publisher, 42 Cannon Street, E.C. 4.

EARLIER CLOSING FOR PRESS. Will advertisers please note that until further notice it will be necessary that Advertisements

intended for the Supplement must FIRST POST THURSDAY MORNING.

# CHEMISTS' TRANSFERS. Messrs. ORRIDGE & CO., 56 Ludgate Hill, E.C.

Telephone No.: City 2283.

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

1.—LONDON, W.C.—Modern Pharmacy, situate in close roximity to several good-class hotels; returns, present rate, 2.000, at full prices; scope for a turnover of £5,000 to £6,000; well-appointed shop and good stock; price to be agreed equitably.

2.—LONDON, S.W. (busy main thoroughfare).—Modern Pharacy, chiefly ready money; returns about £3,500, with scope rincrease under energetic management; attractive, well-fitted hop; stock good and well selected.

3.—SHEPHERD'S BUSH (near).—Ready-money Business, etail, Dispensing and Photographic; returns, under manage ent, about £35 weekly, with scope for increase; net profit, extuding Managers' salary, £500; inclusive rent £35; lock-up hop; price £1,000.

4.—CITY PHARMACY.—Expiration of Lease.—For disposal, the xtures and fittings, together with the stock-in-trade, the whole be removed by the 24th December; this is a good opportunity ra Chemist contemplating opening a Pharmacy to acquire the chole at a reasonable price.

5.—SOUTH LONDON.—Csh Retail Business, situate in the compensation of the compensation of the price.

5.—SOUTH LONDON.—Cash Retail Business, situate in busy usin thoroughfare; returns £1,700, at good prices; excellent pening for extension under qualified management; lock-up shop; eld on long lease.

-HANTS (Coast).—Cash Retail Business, including postal; gross receipts about £12,000 per annum, at full prices er particulars on application. Retail Business,

7.—CHESTER (Near).—General Retail Business, returning 2,000 per annum, at usual prices; small house; satisfactory cason for disposal; price about £1,000.

COUNTY .- Retail and Dispensing Business. 8.-HOME 8.—HOME COUNTY.—Retail and Dispensing Business, with opening for Photographic; the shop is situate in the main street of a town which will largely develop within the next year or two; returns average over £5,300 yearly, and the next profit £865; double-fronted shop, with good residence; held on lease; large stock, modern fittings; price £2,500.

9.—SUFFOLK.—Old-established Business, Retail, Dispensing, and Optical; returns, present rate, about £2,300; commodious premises, situate in the main street; position good; 21 years' lease; price £1,250.

10.—WEST OF ENGLAND.—Established Business; excellent position; see view; returns between £2,000 and £2,500 yearly.

price £1,250.

10—WEST OF ENGLAND.—Established Business; excellent position; sea view; returns between £2,000 and £2,500 yearly; net profit £5%; well-appointed shop, fully stocked; price £1,800.

11.—FOR DISPOSAL.—Wholesale Business, established upwards of a century; a number of Proprietaries are included, which are stocked by most Chemists in the kingdom returns between £4,000 and £5,000, terms, stock and plant at valuation, and sum for goodwill to be agreed equitably.

12.—EASTERN COUNTIES (market town).—General Retail, Prescribing, and Agricultural Business; established many years; returns £700; scope for considerable increase; single-fronted shop; further details on application.

13.—SEAPORT.—Ready-money Business, well situated in busy shopping thoroughfare; gross receipts £2,000; net profit £400; sood opening for quantied man; price £850; the premises may be purchased if desire1.

14.—CHESHIRE.—Light Cash Retail Business; returns between £3.500 and £4.000, at good prices; single-fronted shop; modern fittings; amply stocked; held on lease at low rent; further details on application.

## **UATIONS**

Messrs. 0. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone Profit, the value of Business, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted and eventually becomes the cause of confusion and loss.

Messrs. 0. & Co are prepared to undertake these essential duties and make Special Terms for such services.

ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.

# BERDOE & FISH

Valuers & Transfer Agents 35 JEWRY STREET, FENCHURCH STREET, E.C. 3.

Telephone: 1809 Central.

### SPECIAL NOTICE to

#### INTENDING VENDORS.

Messrs. Berdoe & Fish having disposed of all Businesses placed in their hands, are now in immediate want of sound businesses in all parts of England, especially London, South Coast, S.W. and Western Counties, Midlands and Home Counties, at prices ranging from £800 to £3,000.

> We have cash buyers waiting, and can guarantee quick sales with the utmost privacy.

Private register kept.

Terms sent on application.

Established 1870.

## The Association of Manufacturing Chemists

Head Offices—26/28 Kimberley House, Holborn Viaduct, London, E.C.1

(and at 2 Bixteth Street, Liverpool).

PARKIN S. BOOTH, Accountant & Valuer, PHONE: CITY 6942.

Well known Proprietary Article for Sale. Fullest Particulars on Application.

WE HAVE THE FOLLOWING BUSINESSES FOR DISPOSAL.

1.—MIDDLESEX.—Pleasant London suburb; good-class Retail and Dispensing Business, held on good lease at rental of £75 per annum; cash takings about £60 per week; old-established; large house attached; no Photo or Optics, but excellent scope for same; nicely fitted and well stocked.

2.—NORTH-WEST SEASIDE TOWN.—An exceptionally good Business, in prominent position of large town; returns £4,500 per annum; handsome shop, and large house attached; also Wholesale Photographic connection; price about £5,500, which includes 990 years' leasehold property; profits estimated at about £1,300 per annum, and stock valued at £1,800-£2,000; sleeping or active partner entertained.

3.—Small Factory Premises required in E. London district:

active partner entertained.

3.—Small Factory Premises required in E. London district; forward fullest particulars.

4.—Wholesale Business, dealing chiefly in Toilet Specialities; established four years; excellent connections; good turnover; factory 3.000 square feet, with house adjoining; held on lease of 21 years; fullest investigation invited; balance sheets can be inspected; fullest particulars on application.

5.—Small Mannfacturing Toilet Business, in pleasant Surrey town; excellent factory; held on very low rental; scope for great improvement; inspection invited.

Stocktaking and Valuations for all purposes undertaken upon Reasonable Terms.

can value your stock and put your account-keeping upon a very simple but effective basis, obviating all Income Tax Return worry.

Write at once!!!

BOOKING NOW FOR DECEMBER & 1922.

# PARSON C. BAKER, Ph.C., WM. ROOKE ROBERTS, M.P.S., F.S.M.C. 174 VICTORIA ST., S.W. 1. Tel.: Victoria 27.

VALUERS AND **STOCKTAKERS** Recommended by The British Drug Houses, Ltd., etc. BUSINESSES WANTED.

#### BUSINESSES WANTED.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

NORTH OF ENGLAND (Lancashire preferred).—Drug Store, Herbalist's, or neglected Chemist's Business wanted in industrial town; capable of increase under energetic management; must bear full investigation; cash available. Full particulars, in confidence, to 38/27, Office of this Paper.

PHARMACIST wishes to purchase for cash good-class bona-fide Retail Business, returning about £2,000 yearly; good house accommodation if possible; London or high-class suburb preferred. Replies, in strict confidence, to H. Cooper, 3G Portman Mansions,

SMALL Business wanted; neglected would suit; or Drug Store or empty shop, if suitable. Particulars, in confidence, to "Resorcin" (41/22), Office of this Paper.

WANTED, cash Business, turnover not less than £4,000, with Photographic and Optical or opening for same; cash ready; or management with view to purchase. Apply 15/71, Office of this Paper.

#### FOR SALE.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

PRASS, Box-end beam Scale (1 lb.), on stand, with drawer below, 20½ x 11, height overall 27½", sensitive 2 gr., 30s., carriage forward, or post extra; 40 lb. (about) fine "Cottagers" Beeswax, m.p. 65° C.; the lot, 8½d. lb. f.o.r. G.E.R. (smaller lots 9d.); offers entertained. Apply 40/23, Office of this Paper.

DILL.—English-grown Dill Seed, fat and live, for planting, about 10 lb.; also annual Henbane (seeds); what offers? Grieve, Chalfont St. Peter, Bucks.

FOR Sale, Eureka Tablet Machine, complete with punches; in good condition; offers. Apply 30/59, Office of this Paper.

POR Sale, about 2,000 small Tins (quite new), with covers; 3 in. tall, 1\frac{3}{4} in. square; open to offer; delivered free in London. Apply 15/72, Office of this Paper.

30 GROSS 1-dram Perfume Tubes, glass rod, nickel cap; 12s. cheaper. Hudson, Chemist, Skegness,

#### AGENCIES.

DEC. 10, 1921

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

TRELAND.—An experienced Traveller, who has a first-rate connection among Chemists, wishes to represent a manufacturer of French Toilet Soaps on a commission hasis; highest references. Apply "W. B." (36/10), Office of this Paper.

MIDLANDS.—Agent, representing London firm, manufacturers of well-known and popular line, desires additional Agency; Proprietary preferred; first-class guarantees and references. Apply 41/5, Office of this Paper.

A GENCIES wanted.—Firm, having Travellers and large connection amongst Chemists, are desirous of accepting a good agency; large turnover for a good house assured. Central Trading Co., 66 Victoria Street, London, S.W. 1.

AGENTS, on commission, to introduce good-selling line, required specially for North and East London and adjoining listricts; also for Western Counties, Wales, Liverpool, Manchester, and respective counties. Solidol Chemical Co., Mill Street, Docknead, S.E. 1.

MANUFACTURERS of Toilet Specialities for Chemists and Hairdressers require Agents on commission; good articles at competitive prices. Apply Carmol, Ltd., Blackheath, Birmingham.

MANUFACTURERS' Agents, with large connection amongst principal Chemists in Midlands, Wales, and Ireland, are pen to consider additional agencies for high-class Toilet Specialises and Medicinal Preparations. Apply 32/93, Office of this agency.

#### BUSINESSES FOR DISPOSAL

s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

DINBURGH.—Cash Retail; rent £23; old-established; present hands 18 years; expenses light; showing good profit; opening or Photography; returns, present rate, nearly £1,100; price £800, or offers for goodwill and valuation. Apply 40/31, Office f this Paper.

EEDS.—In well-populated working-class district; old-established Business; satisfactory reasons for sale; Mixed trade, with H.I. (850 scrips for November); returns, exclusive of N.H.I., bout £1,200, which could be considerably increased; good house, parate entrance; price £900; lease to suit purchaser. Marsden, hemists' Valuer, 44 Sholehroke View, Leeds.

CHEMICAL Manufacturing Company proposes disposing of their Perfumery Department and offers the whole of the codwill, designs, trade-marks, lahels, hottles, formulas, etc., for nominal figure; splendid opportunity for a practical man to go nto the Perfumery husiness with hig possibilities with only a mall investment. Apply, in first instance, to A., Box 287, miths' Advertising Agency, Ltd., 100 Fleet Street, London, J.C. 4.

USINESS (Chemist's) in town of 100,000 inhahitants for disposal; stock, goodwill, fixtures, and lease, £500; low rent; apply 41/28, Office of this aper.

OR Sale, in husy residential suhurh of Bristol, Drug Stores; splendid opening for Chemist; hig scope for N.H.I. prescripons; good living accommodation; rent low; stock, goodwill, ad fixtures \$21,000; good reason for disposal; no particulars ven without assurance of reasonable capital or banker's reference. pply 39/27, Office of this Paper.

IGHT Retail and Dispensing Business in good-class residential neighhourhood of Midland health resort; large, handsomely tted, lock-up shop and stockrooms; modern, double front; rent 45 per annum; returns past 12 months £1,700; capable of ing doubled; heavily stocked; price £1,750, or valuation. pply 45/541, Office of this Paper.

MALL Business, Toilet Specialities, for Sale; capable of extension; recipes and small stock. Apply P.C.B. 71/26, Office this Paper.

ABLETS.—Small hut well-equipped compressed-tablet Factory for disposal; electric power; output up to 15 cwt. weekly, l sizes up to 1 in.; price £350, including connection and good-uper.

Apply 45/54, Office of this approach.

WELL-ESTABLISHED West-End Chemist's Business, in London; surrounded by best hotels; 12 years' lease. Parculars on application. Address 2/43, Office of this Paper.

#### PARTNERSHIPS.

PARTNER, qualified Chemist, required by proprietor of sound old-established high-class Dispensing and Light Retail Pharmacy and Photographics in South Devon (coast); every investigation may he made; incoming capital required ahout £800; please state if personal interview possible. Reply to "Activitas" (41/35), Office of this Paper.

#### SITUATIONS OPEN.

#### RETAIL.

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

BIRMINGHAM.—Lady Assistant, Hall or Minor qualification, for Dispensing; willing to assist at Counter and with routine work; state experience and salary required; not answered three days respectfully declined. Apply 35/17, Office of this Paper.

BRIGHTON.—Competent, energetio Assistant, age 30-40, for hrisk Light Retail, with Photography; must be qualified; hours 8.30 to 8, each other Sunday 6 to 8. Please state in first letter age, married or single, when free, and salary required, also give full particulars of previous experience. This is a permanent, comfortable position for right man. "Radium" (41/31), Office of this Paper.

DONCASTER.—Required (after Christmas), capable Junior in good Family business; must be energetic; used to N.H.I. Dispensing. Reply, giving full particulars as to age, height, experience, salary required (outdoors), and enclosing photograph, to Harry Stiles, The Rexall Pharmacy, Doncaster.

LONDON, E.—Qualified Assistant; N.H.I. and General Retail; working-class neighbourhood; permanency; age not material if active; state salary and references (which must he good). "Senex," 22 Castlewood Road, Stamford Hill, N. 16.

LONDON, S.W.—Early in January, smart Junior, ahout 25 years of age, for Optical, Photographic, Window-dressing, and Counter; must have had Optical experience. Apply, hy letter, cnclosing photo, giving age and experience, salary required, to H. T. Escritt, Pharmacist and Optician, 8 Acre Lane, Brixton, S.W. 2.

L ONDON, S.W.—Smart Junior or Improver, for Counter, Stock, and Dispensing, in husy medium-class Retail and Dispensing husiness; must have good references, he a willing and quick worker, and ahle to start at once. Apply, stating, salary required, to 45-55, Office of this Paper.

LONDON, W.—Competent Assistant required; one with West-End experience preferred. Write or call, Rouse & Co., 12 Wigmore Street, W.

L ONDON, W.-Wanted, smart Assistant for late duty; one speaking French an advantage. Full particulars of experience, etc., to Central Pharmacy, 11 Shaftesbury Avenue, Piccadilly Circus, W.1.

L ONDON, W.C.—Junior Assistant wanted (at once) for mediumclass husiness; personal application preferred. J. W. Roherts, Pharmacist, 10 Tavistock Place, Russell Square, W.C.

L ONDON, W.2.—Unqualified Assistant, under 25; thoroughly able to extract teeth (no amateurs); must have General experience; take alternate Sunday duty, and live near when engaged. State very full particulars, salary, etc., in first letter to S. V. (41/8), Office of this Paper.

SHEFFIELD.—Wanted, January 2nd, fully-qualified Dispenser, to take charge of Dispensing Department; age 30-40; must have had first-class experience in similar position; must be conversant with Doctors' latest requirements in Medicine; a good organiser and energetic; highest references essential. Apply, stating experience, salary, height, and when at liberty, enclosing photo, to Mr. Austen, c/o G. T. Newsholme, Ltd., 27 High Street, Sheffield.

A SSISTANT, about 30, having good all-round experience, required January 2nd. Apply, stating salary required and usual particulars, to T. G. Stewart, Chemist, Bracknell.

CAPABLE Dispenser wanted for few months; state full particulars in first letter. Nathl. Smith & Co., High Street, Cheltenham.

DOCTOR, South-East London district, requires Dispenser for evening work from 7 to 9. References, salary required, and other particulars, to 38/34, Office of this Paper.

DISPENSER, lady or gentleman, part-time, required for North London Doctor; 9-11.30 a.m. and 6-8 p.m.; salary £2 per week. Apply 14 Gibson Square, N. 1, before 11 a.m. or after 6 p.m.

EVENINGS, Wednesday and Thursday each week, with an occasional Friday evening, from 6 to 8, mainly for N.H.I. Dispensing; qualified. State terms, etc., to 6. Pasco & Son, 57 Hackney Road, E. 2, near Shoreditch Church.

HODDERS, Bristol, require services experienced gentlemanly Assistant; General Retail, Photography, Window-dressing; branch shop, Bath; good prospects keen, energetic man; highest references required. State age, salary, and other particulars, to Managing Director, Henry Hodder & Co., Ltd., 5 Nelson Street, Bristol.

IMPROVER wanted, January 2nd; good Dispenser. State salary and full particulars to Hopwoods, Ltd., 345 Scotland Road, Liverpool.

MANAGER, qualified, wanted to manage small country business; must be active and reliable; live in; agricultural district; must have good references. Particulars to 41/27, Office of this Paper.

QUALIFIED lady Assistant required to take up duty of December 12th; must be thoroughly reliable. Apply "M.," Home Park Road, S.W. 19. 'Phone: Wim. 438.

REQUIRED (after Christmas), Junior Assistant for good-class Retail and Dispensing business in Surrey; must be good at Counter and Window-dressing; highest references essential. Please state usual particulars and salary required (outdoors) to Trimmiug & Co., Ltd., Alton, Hants.

REQUIRED, immediately, unqualified Assistant; smart, quick worker, Window-dresser. State age, salary, and full particulars to W. E. Giles & Sons, Chemists, Newport.

U NQUALIFIED Assistant for North-East London. Full particulars and salary required to 39/28, Office of this Paper.

UNQUALIFIED Assistant required. State age, references, and salary to A. P. Tiley, Pharmacist, Burslem.

WANTED, young qualified Assistant to manage branch. Apply, with photo and particulars, A. W. Hockin, 5 Lewes Road, Brighton.

YOUNG lady, experienced in Surgical Department, required for old-established progressive business in the West Riding of Yorkshire; permanent position for satisfactory applicant. Apply "H." (38/33), Office of this Paper.

#### WHOLESALE.

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

he ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

A CTIVE Representative on commission required to call on Chemists and Druggists to sell 2d. packets of Dyes; selling rapidly everywhere. State, in confidence, ground covered, other agencies held, references, etc., to Z. L. 288, care Deacon's, Leadenhall Street, E.C.

A MBITIOUS young Representative required, with good appearance and address, capable, tactful, and energetic, with knowledge of Drug and allied trades, to call upon Wholesale and Export; good man will receive every support. State age, experience, and salary required, 32/940, Office of this Paper.

POR INTERVIEWING THE PROFESSION AND TRADE.—Two Representatives required by leading firm of Manufacturing Chemists for Scotland and Ireland respectively; preference given to young Pharmacists possessing tact, enthusiasm, and keenness. State full particulars, in confidence, covering age, experience, and salary required, to 32/92, Office of this Paper.

## RETURNING PHOTOS, &c.

Advertisers in this section who receive portraits and copies of testimonials from applicants with a stamped addressed envelope for reply are reminded that the undue retention of these often means a hardship to the sender. All personal documents should be returned as promptly as possible after perusal.

JUNIOR required to assist at Despatch Counter; must be experienced; preference given to one used to Surgeons' trade; state age, wage, usual particulars. W. A. Wharram, Ltd., Wholesale Chemists, 34 Lady Lane, Leeds.

#### SHEEP DIPS.

MANUFACTURING COMPANY is open to M. appoint competent, practical man for above; state experience, giving full par-ticulars. James Boyd & Co., Incorporated Accountants, Raleigh House, Queen Street,

REPRESENTATIVES required for the sale of a very high-class Chocolate; applicants should have established connections amongst Medical men as well as Pharmacists; commission basis only; Travellers carrying other lines, if non-competitive, not objected to. Write, giving full particulars, in confidence, P.C.B. 71/27, Office of this Paper.

PEQUIRED, by well-known Manufacturing House, two capable and energtic Representatives, accustomed to calling upon wholesale and Export Buyers of Packed Goods, Toilet Soaps, and Perfumery. Give full particulars (in confidence) of past experience, age, and salary required, 32/94, Office of this Paper.

TRAVELLER required for London and country; must have good knowledge of Essential Oils and Synthetics. Write, stating full particulars and salary expected, to 45/53, Office of this Paper.

TRAVELLER wanted, London and the South; attractive side-lines, Chemists and Hairdressers; 15 per cent. commission. Full particulars, please, 41/26, Office of this Paper.

TRAVELLERS.—Wanted, Travellers for all over England to introduce French Perfumery, Soaps, Powders, etc.; liberal commission. Write Lemoine Fils et Cie, 146a Queen Victoria Street, London, E.C. 4.

WANTED, part services of competent, well-introduced Salesmen calling on buyers for Surgical Rubbers; London or Counties; exceptional prices; on commission or own account. Apply Voltzi & Kissa, 45 Cleveland Street, London, W. 1.

#### SITUATIONS WANTED.

#### [HOME,]

#### RETAIL.

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

The Advertiser may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-

A.A.A. -LOCUM; experienced; take entire charge; offers "Chemicus," 2 Christian Road, Preston.

A.A.—QUALIFIED, 32, desires Managership or position of trust; sober, steady, and trustworthy; smart appearance; Dispensing, Photography, Prescribing, Salesmanship; work up neglected business; London preferred. Apply 39/17, Office of this

A.A. -ASSISTANT, qualified; young, tall; first-class experience; Photography; energetic; excellent references; London or provinces; disengaged. 41/40, Office of this Paper.

A. ASSISTANT, disengaged 4 p.m.; good references; good all-round experience. 40/38, Office of this Paper.

A CAPABLE Assistant (26) desires position; good-class Dispensing experience; quick and accurate; also Counter and Photography; provincial. S. C. Haigh, 25 Stafford Parade, Halifax.

A PHARMACIST requires position for New Year; experience includes five years' apprenticeship and two years as demonstrator in Pharmacy; excellent references. "Ortho," 13 Hugh Road, Small Heath, Birmingham.

A QUALIFIED Chemist, with good experience and references, desires berth as Manager or Assistant. S. P. Wright, 651 Liverpool Road, Platt Bridge, Wigan.

A QUALIFIED Chemist, lady, fully experienced in business, trict; excellent references. "Gwalia" (39/12), Office of this

QUALIFIED Chemist, Scotch, active and willing, age 29, excellent training and experience, seeks permanency as assistant or Manager; moderate salary. Apply 29/23, Office of his Paper.

 ${f A}^{
m N}$  Assistant, reliable, tall, unqualified (23) desires post; Worcester district preferred, but not essential; good-class sperience. Skey, 22 Eton Villas, Upper Chase, Malvern.

A N Assistant (244), qualified, tall, requires situation; at liberty now; moderate salary; interview London or South-cast Counties. 42/6, Office of this Paper.

A DVERTISER offers services Chemist, Dentist; 25 years' ex-perience both branches; skilled Dispenser, Prescriber, Opera-or; Photography, Counter; unregistered. Munslow, Evesham.

AS your Manager I can save you money.

-Business man, with sound knowledge of Retail and Wholesale Pharmacy, at liberty shortly. Write "Pharmacist" (41/10), Office of this Paper.

S Assistant or Manager; highest references; good education and experience; thorough reliable and proficient; young; tergetio; disengaged. Rathgar, Old Bedford Road, Luton.

A S. Assistant Dispenser; age 27; married; three years' experience as Assistant Dispenser and Dresser. M.L. 75259, Office this Paper.

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SSISTANT or Locum; 15 years' West-End and provincial experience; disengaged. Allman, 39 Culmington Road, ling, W. 13.

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